Towards a taxonomy of services offered by start-up business incubators: insights from the Mediterranean region

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Abstract: Business incubation aims at stimulating entrepreneurship and nurturing ideas to transform them to viable ventures and drive economic growth. The paper defines a comprehensive framework that serves as a basis for the categorisation of all incubation services. The proposed taxonomy has been applied on ten Mediterranean university incubators. An indicative sample of five countries has been defined, focusing on university incubators as they bridge the innovation potential of research/academia communities with the real business world, underpinning a sustainable and robust entrepreneurship model. By mapping the sample with the categories of their services, we intended to investigate how they differentiate from other incubator types. It was concluded that university incubators fall shorter only in the provision of administrative services in relation to typical incubators. This framework shall be further used as a tool for policy makers supporting their resource allocation decisions and help internal stakeholders identify and adopt best practice models.

Keywords: university incubators; services; taxonomy; entrepreneurship; incubation types; Mediterranean.


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1 Introduction

There is extensive theoretical background describing the term ‘incubator’ as it refers to a mature concept, becoming a ubiquitous phenomenon in many parts of the word (Bergek and Norma, 2008). The term can be found as back as 1959, after the establishment of the first incubator in Batavia of New York in the USA (Lewis, 2002; Aernoudt, 2004) in order to revitalise that neighbourhood after the closure of a large factory. With the popularity of the business incubation concept rising in the early 1984 in Europe with the development of Business Innovation Centres, numerous studies have been conducted to assess the emerging incubator industry (Allen and McCluskey, 1990; Mian, 1996; OECD,
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Evolving during the course of years (European Commission, 2002), the concept of incubation focuses on initiatives aiming at stimulating and supporting entrepreneurship (Cooper, 1985; Marrifield, 1987; Autio and Klofsten, 1998) contributing to the support and acceleration of the development and success of affiliated ventures (Hansen et al., 2000; Abetti, 2004), promoting economic development, innovativeness (Acs and Audretsch, 1992) and the emergence of new technology-based growth firms, on both national and local level (Birch, 1981; Reynolds and White, 1997). EU gives specific emphasis on speeding up the incubation process in order to stimulate the establishment of both financially and operationally independent firms within a finite timeframe (InfoDev, 2010). US National Business Incubation Association (NBIA) defines business incubation as a “business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services” (InfoDev, 2010).

A successful incubator constitutes an effective tool that can successfully promote business actions (Pena, 2004; Bollingtoft and Ulhoi, 2005) when it fulfils specific goals, as is the promotion of a substantial number of novel enterprises with growth potential, an optimal rotation rate, a high survival rate of mobilised graduates capable of performing business outside the protective and nurturing premises and so on. Moreover, an incubator is considered successful when functioning as a gateway to industry, creating sustainable R&D centres aiming at, after the incubation period, constituting ventures independent, self-sustaining businesses.

Regarding the concept of the incubator there are a lot of issues to study, i.e., what constitutes the selection criteria for a start-up firm to be accepted in an incubator (Aerts et al., 2007), under which type of models an incubator operates (Bergek and Norman, 2008), what are the economic development indicators, such as innovation (Acs and Audretsch, 1992), creation of new and high quality jobs, and generation of profits (Reynolds and White, 1997; Birch, 1981), leading to the success of entrepreneurial firms. It is obvious that the concept of an incubator is multidimensional, demanding the examination of various consisting features. Although taking this multidimensionality into account, this paper focuses on the provision of different services within the incubation process. While most incubators offer certain common services and activities, they also provide distinct services that reflect their own customer-base as well as the specific resources available within their respective communities. These differences give rise to different incubating models.

Therefore, in this paper, we define a framework that can serve as a basis for identifying best practice incubator models through the categorisation of the offered services and for more stringent evaluations of an incubator performance. Our proposed taxonomy has been tested and applied on indicative incubators from five countries in the Mediterranean region. The reason for focusing on those territories is the socio-economic variations and peculiarities they are characterised by, due to the major struggles that they have faced during the last decade. The Southern European countries face fundamental weaknesses concerning the size and structure of manufacturing, deficits in innovation and education. Aiginger (2013) argues that despite the convergence that the European North and South have tried to achieve, the economic crisis has negatively influenced any attempt, widening this divergence. The financial crisis that the Southern European countries face, in comparison to the countries of the North, has constituted them weak,
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concerning the exploitation of economy globalisation, which can be partially addressed through fostering entrepreneurial and innovation initiatives. In particular, we selected to focus on one of the identified types of incubators that are university incubators since apart from the offerings of rest types it also connects the research and academia community to the innovation cycle.

This paper consists of the following sections. The second section describes the various types that have arisen by categorisations of incubators based on specific characteristics (financial support, equipment, type of offered services, etc.) found in literature. In Section 3, we present a framework allowing us to categorise the services that are engulfed in an incubator. In Section 4, the methodology and data gathering instruments are described, while results from the application of this framework are presented in Section 5, focusing on the most famous university incubators of each Mediterranean country that has been selected. Finally, Section 6 outlines the conclusions and Section 7 provides suggestions for further research.

2 Types of incubators: a taxonomy through time

Literally, an incubator offers the care that premature infants require, in controlled conditions. These conditions should help newborn babies survive, grow and develop once they have left the incubators. Respectively, business incubators provide a supporting environment (Allen and Bazan, 1990; Peters et al., 2004) and nurture young firms, aiming at providing them assistance in order to survive and grow during their start-up period when they are most vulnerable (Aernoudt, 2004) and exposed to competitive and highly demanding environments. The backbone of the concept of incubation is the interactive process of development with the aim of encouraging its tenants to start working on their idea, transforming it to business value (Klofsén, 2005) making them viable start-up companies in order to develop innovative products. The incubator concept seeks an effective way to link technology, capital and know-how in order to highlight and promote entrepreneurial skills and talent, accelerate the development of new companies, and thus mobilise the access to technology (Smilor and Gill, 1986). It is worth mentioning that the concept of incubation has gone through several stages to reach the form we know today. The first generation of incubators focused on job creation and supply of ground facilities, where tenants were offered office space and basic shared facilities. In the 1990s, these services were expanded, providing consultancy services, training sessions, network access and venture capital, moving on to the second generation of incubators. The third generation started in the late 1990s enabling access on ICT and high-tech knowledge (Hackett and Dilts, 2004b).

From the literature review, we can discriminate the plethora of different types that an incubator can adopt. That phenomenon, combined with the various business models observed over time, has been driven by the increase and differentiation of company requirements and needs, which consequently has prompted incubators to diversify the provided services. Interestingly, there are various categorisations of types of incubators mentioned, each of them taking into consideration and focusing on different criteria. Some researchers seem to treat incubators and technology/science parks as synonymous (Lindelöf and Löfsten, 2004) distinguishing between different types of incubators based on the development stage of their incubatees: start-ups, business development and
maturity (Bhabra-Remedios and Cornelius, 2003). Another categorisation takes into account characteristics such as the way they are financed, where they can be distinguished to public incubators, non-profit incubators and university and private ones (Kuratko and LaFollette, 1987; Smilor, 1987; Temali and Campbell, 1984). The type of incubatee follows, where the discrimination results are the spin-off or the start-up firms (Plosila and Allen, 1985). Plosila and Allen (1985) and Sherman (1999) were based on the business focus of the incubatees, where they enlisted the product/service development or the manufacturing. Brooks (1986), on the other hand, was based on the business focus of the incubator, where we meet property development (single or multi tenant) or business assistance (shared space, low rent and business support services). Barbero et al. (2012) emphasise that business incubators can vary dependent upon their goals and objectives, ownership and management, funding strategies, type of incubatees, facilities, business model or services offered. Aernoudt (2004) discriminates the incubators in economic development and technology ones. This distinction is based on the primary goal that each incubator focuses, where the former focuses on the narrowness of regional development gaps while the latter focuses on the development of technology-oriented firms.

2.1 University incubators

The term university business incubation (UBI) narrows to incubation programs or infrastructures managed by, or affiliated with one or more universities or academic institutions. Although the main goal of universities is education, they can still make substantial contributions to local economies through research leading to substantial inventions and discoveries, faculty spin-off ventures and technology transfers (Rogers, 1986; Mansfield, 1990; Schutte, 1999; Varga, 1999; Chiesa and Piccaluga, 2000). A more specialised form of UBI is the university technology business incubators (UTBI). It is about multi-tenant buildings, placed in and around University premises, where besides the standard services (i.e., affordable and flexible space and typical incubator and university-related services), the tenant firms are technology-based (Mian, 1996).

Concerning the provided services, the ones of a typical incubator include shared office services, business assistance, access to capital, business networks, and rent breaks. University-related services include faculty consultants, student employees, university image conveyance, linkage to the academic community, library services, access to scientific libraries and to state-of-the-art publications, laboratories/workshops and equipment, related R&D activity, technology transfer programs, employee education and training, and sports and other social activity.

Taking into consideration both the financial and the socio-political crisis that the Mediterranean region faces nowadays, it is of crucial importance to record the mapping of the business activities in those countries. The lack of funding, the inability of access in every asset that each firm needs (infrastructure, starting venture capital, cutting-edge technologies, advertising, networking, etc.) has brought upon many obstacles difficult to overcome. Based on the arguments of Dana (2000), the development can be achieved fastest if the countries focus on the exploitation of main pivotal resources such as energy, skilled and educated labour and sustained access to knowledge technologies. The countries of the South, aiming at a gradual convergence with the North Europe, are of critical importance to invest on research and development, boosting innovation actions that will gradually lead to a sustainable and robust entrepreneurship (Schumpeter, 1911),
making wider and better use of new technologies, focusing on the better use of upgraded education and lifelong learning, aiming at increase of productivity and growth. An indicative example of this effort is the initiatives taking place in Greece, where, through structured actions (Dana, 1999) and through the establishment of specialised organisations, effort is given in order to preserve their cultural tradition.

The adaptation of the incubator concept could serve as a nest, where a good idea will have the opportunity to be developed, overcoming the initial problems a start-up business might have.

Despite the fact that there is extensive theoretical background describing some categories of incubators, grouping of common characteristics they have, there is lack of studies collecting and evaluating the services a university incubator can provide. The aim of this study is to fill in this gap by presenting a framework of incubation services, focusing in the university incubators that are active in countries of the Mediterranean region.

3 Incubation services framework

As stated above, the incubation process includes several services and infrastructures that may vary among the various types of incubators and their individual characteristics. According to our perspective, the providing services of an incubator are the ones that give the desired competitive advantage, otherwise the term ‘hotel’ could be a better description than incubator, although there is the argue that colocation is not a necessary feature of an incubator (e.g., Nolan, 2003; von Zedwitz, 2003). Incubators may deliver different set of support services to their tenants, i.e., entrepreneurs and small business such as flexible space, shared equipment and administrative services. Besides accommodation, incubators provide assistance in developing business and marketing plans, building management teams, obtaining capital, access to a range of other more specialised professional services, access to finance (mainly through links with seed capital funds or business angels), legal advice, operational know-how and access to new markets. It is also important to understand that every business incubator has its own focus or specialisation. For example, some stress more on physical facilities, office space, administrative services, while others may focus on training and financing aspects. However, in the current section, we propose a framework incorporating the complete list of possible services that a business incubator could offer to emerging ventures and start-ups along their lifecycle to increase its success rate. This framework is generic enough to be applied in all types of incubators regardless their governance structure, however there was a particular focus on the inclusion of services found in university incubation programs.

In order to end up with a list of must-have services, a thorough review has been conducted to relevant literature. Moreover, we have studied the most famous global incubation and acceleration programs with regard to their offerings. It has to be noted that acceleration services have been researched as well, due to the fact that their differentiation from incubation lies more on the stage of the business lifecycle of tenants to which they are providing services, than on the actual service types (Cohen, 2013; Cohen and Hochberg, 2014). Therefore, whereas the incubator nurtures the business throughout the start-up phase, accelerators intervene during the development phase when
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A young business has already been launched and needs specific injections of capital or know-how under the common goal of preparing companies for growth. Furthermore, the duration of the above services may vary among up to years to early start-ups or months to young ventures in acceleration programs.

Jaca (2012) discerns two generic categories of incubation services based on the type of support provided. The first one named technical support refers to the development of vocational skills while the other on business oriented activities, such as access to networking opportunities, business planning, marketing, access to finance, business mentoring and registration, etc. However, the literature review has revealed additional incubation services that lead us to group them into 8 core categories listed below (Smilor et al., 1988; Mian 1996; Wiggins and Gibson, 2003; Abetti, 2004; Aerts et al., 2007). The complete service framework is depicted in Figure 1, while each individual category of services is explained afterwards.

**Figure 1** Presentation of the incubation services framework (see online version for colours)

1. **Infrastructures**: The kind of physical resources and facility based services offered to the tenants, such as working space, offices, conference rooms, facilities, equipment, network infrastructures.

2. **Operational services**: This category includes administrative services and additional ones required for the daily operation of a company, i.e., secretarial, receptionist, legal, accounting services.

3. **Business support**: Consulting services, entrepreneurial advice and technical guidance, mentorship provided either ad hoc or on a regular basis as integral part of the incubation process, addressing topics such as business model development,
strategy planning, marketing assistance, technology advice and intellectual property rights protection, etc.

4 **Financing:** Some incubators have their own funds with which finance their incubates to go from conception to production, while others simply mediate and bring together new companies with venture capitals in charge of their financing or facilitate their access to other sources of fund raising, venture capitalists, seed investment, grants and crowdfunding.

5 **Networking:** Activities for increasing connectivity with people able to exchange knowledge and ideas with tenants during the incubation phase (mentors, coaches, other tenants, alumni), or building relationships with potential partners after a new company is established (employees, clients, investors, partners, experts, etc.).

6 **Events organisation:** Events organised as part of incubation programs vary among ideas screening, matchmaking, mentoring, brokerage, pitching events, workshops, conferences and competitions schemas.

7 **Educational services:** Teaching and training activities mostly related with entrepreneurship and innovation curriculum, knowledge transfer and technology support initiatives to enhance the tenants’ skills and performance. These activities can be carried out either in house or redirect to third parties programs, e.g., a university master program on innovation and entrepreneurship.

8 **Self-organisation:** Services supporting the operation and management of the incubator itself, including the implementation of selection criteria for incubatees entry and exit, sustaining tools supporting the delivery of services, monitoring and follow-up activities.

The supply of the above services has been slightly evolved during the years, but do not differ greatly in terms of what they offer to tenants among the three incubation generations defined by Bruneel et al. (2012). The major evolvement between these generations is the shift from provision of physical resources to the business expertise and services provision, which was initially conceived by Smilor (1987). In his incubation model, he connects the support systems with the process outcomes. However, this model lacks the interrelation of incubators’ service provision with the state of the innovation ecosystem and the entrepreneurship status of the region or country they operate.

Regarding the service specialisation of university business incubators, what seems of utmost significance is the close relationship with their affiliated universities, since they can utilise their institution resources (Mian, 1996). For instance, university-based incubators can use university research facilities such as laboratories, libraries, specialised equipment and telecommunication network access. In addition, faculty members can act as consultants within the business support services or access to students as potential employees. University incubators share educational services in terms of training programs or seminars available. Moreover, they can assist tenant firms in carrying out and in adopting research results. With concern to financing, they typically provide awards in the form of small amounts of money, as seed financing. However, according to the empirical study conducted to identify the determinants of incubatee success in China (Zhang and Sonobe, 2011), proximity to universities consists only a secondary factor for the incubator performance.
4 A survey on university incubators services

4.1 Methodology

In this section, the taxonomy presented before, is applied on a set of university incubators from the Mediterranean region to perform an empirical study. We have selected to conduct a comparative analysis on university incubators from five Mediterranean countries that operate in different socio-economic contexts, i.e., Italy, Israel, Greece, Turkey and Egypt. The aim of this analysis is to map the types of services that they support and to examine to what extent their business incubation programs include a comprehensive and integrated range of supportive services.

For the selection of the sample, we primarily searched for incubators included in the top ten rankings of university business incubator or university associated business incubator (with no formal affiliation but working closely to a university) and accelerators for 2015 created by UBI Global. UBI Global has developed a methodology to assess global University and University associated business incubators against a wide range of performance indicators. For the countries not represented in the aforementioned list (Greece, Egypt and Turkey), we found the well-known university-based programs through desk research. After the selection phase, all programs have been studied thoroughly, based on the information that is available in their websites and via a questionnaire, which has been filled to record their characteristics. The questionnaire, which is presented in Appendix, is structured in three sections; the first one refers to general information on the incubator and their types, the second section reflects the proposed framework and finally the third contains open questions discussed with various stakeholders in three relevant workshops organised. Through these instruments, the processes, structures, infrastructures and service portfolios have been examined against the eight categories and the insights relevant to the scope of the current research have been gathered.

4.2 Description of selected incubators

The selection process described above resulted into a sample of ten incubators, which are briefly presented in the subsequent paragraph.

In Greece, Orange Grove started by the Netherlands Embassy in Athens, together with a number of Greek and Dutch corporate sponsors, charity foundations and universities, among them the Athens University of Economic and Business, the University of Amsterdam and the Delft University of Technology. AEGEAN start-ups is a university business accelerator built around a competition for the collection and promotion of best ideas aiming to assist youth entrepreneurship within and outside the University of the Aegean Communities. PoliHub is the business incubator of the Politecnico di Milano supported by the Milan Municipality, responsible for the development and growth of a strong start-upper network in Italy. H-FARM consists of an innovative platform associated with universities that supports the creation of new
business models and the digital transformation and training of Italian companies. In order to contribute to the entrepreneurial ecosystem of Turkey, Istanbul Technical University and ITU ARI Teknokent have established ITU Seed\textsuperscript{7} in 2011, which is strongly supported by ITUNOVA TTO and brings entrepreneurs, investors and professionals together. It is open to all the industries while special categories announced every year, focusing on specific verticals. Another entrepreneurship hub in Istanbul Turkey is the Koç University Incubation Center\textsuperscript{8} operating on the Koç University Şişli campus assisting entrepreneurs to build sustainable, scalable, technology and social-based ventures. StarTau\textsuperscript{9} – Tel-Aviv University Center of Entrepreneurship was established in 2009 in order to provide entrepreneurs with practical knowledge and tools for creative initiatives and personal advancement. An example of vertical incubator is Cyber Labs\textsuperscript{10} on cyber security, launched under the Israeli Office of the Chief Scientist’s incubator program, by Jerusalem Venture Partners in partnership with Ben-Gurion University (BGU) in the city of Beer-Sheva in the south of Israel. In Egypt, the first university-based incubator was launched in 2013, by the American University of Cairo, called Venture Lab (V-Lab),\textsuperscript{11} strongly capitalising on the institution’s infrastructures. Another innovation initiative in Egypt is the Accelerator of Technology Innovation and Entrepreneurship Center,\textsuperscript{12} which includes a start-up support program and a wide range of services from consultations to trainings.

5 Results

The results of the application of the framework, presented in Section 3 on the list of the previously described incubators, are summarised in Table 1. The existence of the corresponding service on each university incubator is indicated with the use of the ‘X’ symbol, while with regard to the financing services, the type of funding provision is elaborated.

From the conducted analysis, it is concluded that universities capitalise on their existing assets to foster entrepreneurship instead of acquiring anew resources. Therefore, university-based incubators prioritise their activities in the provision of education and business support services, which rely on their main educational activities and curricula offered by tutors and academic personnel respectively (although also external experts are also acquired). Physical facilities are also available in such initiatives; however, it does not consist one of the relative advantages as they partially cover the needs of start-ups for hosting them. One of them, Orange Groove provides facilities for every day operation but at low cost. With regard to financing, some incubators connect their tenants with venture capitals and assist them in the detection of funding opportunities (PoliHub, StarTau, AUC Venture Lab,TIEC), while others (Aegean, H-FARM, ITU SEED) also provide seed funding to selected start-ups. Capital investment is provided only by Cyber Labs. These funds come from public contribution, not only for the university-based ones, but also the associated incubators are ordinary launched or operated by governmental institutions.
<table>
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<tr>
<th>Country</th>
<th>Incubator</th>
<th>Infrastructures</th>
<th>Administrative services</th>
<th>Business support</th>
<th>Financing</th>
<th>networking</th>
<th>Events organisation</th>
<th>Educational services</th>
<th>Self-organisation</th>
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<td>Greece</td>
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<td>TIEC Accelerator</td>
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<td>Funding opportunities</td>
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What is almost absent from the university-based services is the administrative support (only two out of the ten examined incubators provide this type of service and the one of them provide just one subset of services – solely legal and accounting), a fact that can lead to the assumption that the structure and operation procedures of a university are not flexible enough to allocate part of its staff for the administrative support of the tenants of its incubator. All examined incubators exploit their networks consisting of academic, private and public bodies and organise events of different scope, networking, mentoring, brokerage events, competitions and boot camps. Finally, self-organisation is achieved through central governmental structures, usually adopted by the associated academic institutions.

6 Discussion

In the previous sections of this paper, we have developed a framework for the classification of incubators’ service portfolio. This framework has then been successfully applied to ten operating incubators, resulting in the mapping of these incubators against the eight clusters of provided services. The aim of this analysis was to examine to what extent university incubation programs include a comprehensive and integrated range of supportive services. The examined countries belong to the Mediterranean territory, an environment with socio-economic variations and peculiarities. One could assume that the abovementioned obstacles would act negatively, however it appears that entrepreneurship is a tangible goal and can be a source of opportunities in that region. What makes the countries of the catchment area special is a mix of various factors. The first and foremost is the geographic location and natural resources of these countries, particularly their sea, sand, and all the natural assets. Moreover, because of their location, these countries are accustomed to habitants of various cultures and relations between them. Mediterranean countries can exploit their unique characteristics, either by keeping them as they are (highlighting their traditional power) or by evolving them.

The strategic plan of a sustainable and robust entrepreneurship model is of utmost importance, assisting the Mediterranean countries remain economically vibrant and competitive. The desirable economic consolidation will not only be achieved by reducing wages and public expenditure. Governments should be allies in entrepreneurial actions, by adopting long-term goals and visions, eliminating bureaucracy barriers, exploiting every possible asset that can be hidden in the uniqueness of each country, making wider and better exploitation of new technologies, and qualified human resources. The prospects are enhanced through university initiatives that act as innovation drivers leveraging their institutional capacity and infrastructures. Although the majority of these initiatives do not concern the foundation of incubation programs by the universities themselves, in all examined countries universities build linkages with external incubators.

7 Conclusions and further steps

The results from the application of the framework revealed that the differentiations among types of incubators lie more on their operational model than on their service portfolio. In particular, it is generally concluded that each incubator designs its business
operations, according to its strategic objectives and is aligned to each resources drawn from the innovation ecosystem it belongs. In the examined cases, this is achieved to a large extent by utilising the facilities and educational material of their academic environments. Though, university incubators should further exploit the available human network (containing students and alumni) fostering a thriving ecosystem of innovation, education and business. As far as the range of services provided, it is sufficient in comparison with typical incubators, whilst following a specific pattern. However, the gap of the absence of administrative services could be partially covered with an incubator manager responsible for planning, leading and organising the day-to-day operations of the incubator and ensuring that incubatees receive the best quality services that will allow its smooth operation until growth and business development. This will also have impact on the self-organisation of incubators and will enhance the common central governmental structure. As already mentioned, financial capacity is subject to public contribution, so due to the current socio-political context, efforts could be targeted in enlarging their networks with third parties to increase the access to external funders and strengthen networking activities. In parallel, universities can contribute to the sustainability of their associated incubators, by enhancing the capacity of their R&D departments and organising entrepreneurship support activities in order to ensure diversity and productivity of the programs.

The proposed framework, apart from a comprehensive taxonomy of the incubation process’ services can be further used as a tool both for policy makers’ resource allocation decisions and for those involved in incubator activities at the practical level concerning the identification of best practice models. For instance, a possible extend of the current work is to which of the above services can achieve certain goals, which is the optimal combination to maximise efficiency eliciting vital sustainability plans, and how these services should be integrated to increase incubation performance or to build a differentiation strategy. Furthermore, a complete evaluation on the business impact should be conducted on the basis of the outcomes produced by the relevant services, probably enhanced with financial comparative data of each incubator, revealing their actual-profitable or not-business activity.

An empirical study is suggested, combining the abovementioned financial data with economic indicators of the corresponding territory of each university incubator so as to obtain results that would indicate their connection to each Mediterranean region. Through this comparison, the direct connection an incubator must have will be enhanced in order to create new job offerings, to revitalise cities and regions, and to diversify local economies (Tavoletti, 2013), acting as a business moderator.

References
Towards a taxonomy of services offered by start-up business incubators


Towards a taxonomy of services offered by start-up business incubators


Notes

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### Questionnaire on university-based incubators services

#### University-based incubators services

### A Basic information

- **Incubator name**

<table>
<thead>
<tr>
<th>Institutional support</th>
</tr>
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<tbody>
<tr>
<td>Private/Public</td>
</tr>
<tr>
<td>1 Private</td>
</tr>
<tr>
<td>2 Public</td>
</tr>
<tr>
<td>3 Public-Private partnership</td>
</tr>
</tbody>
</table>

- **Website**

- **Year of establishment**

<table>
<thead>
<tr>
<th>University affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>University-based (managed or formal affiliated with a university)</td>
</tr>
<tr>
<td>University related (no formal affiliation but works closely with a university)</td>
</tr>
</tbody>
</table>

#### Type of incubation program

1. Incubator
2. Accelerator
3. Science/Technology park
4. Incubation program
5. Ecosystem/Meeting place

#### Expertise

- Vertical/Sectoral
- Horizontal
- Technological expertise
Towards a taxonomy of services offered by start-up business incubators

B Incubation services

In the following questions, please fill in with the services offered by your incubation program

Physical facilities
- Working space/Offices
- Meeting rooms
- Equipment
- Laboratories
- Network infrastructures
- Renting spaces (for free of at any cost)
- Other...

Administrative services
- Secretarial
- Receptionist
- Legal
- Accounting
- Other...
- Business support
- Mentorship
- Coaching
- Management
- Sales and marketing
- Technical guidance
- Ad hoc advice

Financing
- Seed
- Capital investment
- Access to funding opportunities
Crowdfunding
Other...

Networking
Customers
Employees
Partners
Investors
Alumni
Other...

Events organisation
Ideas screening
Competitions
Hackathons
Brokerage events
Pitching
Matchmaking
Mentoring events
Networking events
Other...

Educational support
Lessons
Curricula
Access to electronic scientific libraries/databases
Specialised seminars
Other...
Towards a taxonomy of services offered by start-up business incubators

Self-organisation
☐ Staffing
☐ Own financing
☐ Marketing
☐ Web-based services/Online platforms
☐ Other...

C Open questions

What other services does your incubation program include?

Can you provide ideas for new services of a university-based incubator?

What are your key relations/collaborations to other entities from business, academia and administration?

What are the various challenges that a university incubator faces?

What can be a set of best practices that can assist UBI in generating sustainable startups?