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Business incubators: the impact of their support

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Chapter 3

Supports by the Business Incubators

This chapter addresses *RQ1: What are the main supportive activities offered by UBIs that influence the performance of an NTBF?*

Despite all recent substantial research efforts, it is still unclear to what extent the activities of incubators have an impact on the performance of an NTBF and on the innovation strategy (Soetanto and Jack, 2016; van Rijnsoever et al., 2017; Soetanto and Jack, 2018). Chapter two revealed that the results of the previous studies are not sufficiently specific (see Hackett and Dilts 2008; Schwartz, 2013). It is our aim in this chapter to address the gap by investigating explicitly the *nature of the supportive activities offered by business incubators, in particular by university-based ones*.

The chapter proceeds as follows. Section 3.1 explains the reasons behind the creation of BIs. Section 3.2 gives a literature review on the nature and characteristics of the UBIs. In section 3.3 our research methodology is described. Then we address the field work in section 3.4. Finally, section 3.5 provides a conclusion.

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3.1 Why BIs are Created?

As highlighted earlier, NTBFs stimulate innovation and are important for job-creating. As such, NTBFs are significant drivers of the economy (see Bollingtoft, 2012; Brown and Mason, 2014; Stokan et al., 2015). So far, investigations on NTBFs have concentrated on three topics:

- (1) the investigation of NTBFs' requirements,
- (2) the identification of their characteristics (see, e.g., McAdam and McAdam, 2008), and
- (3) providing a proper environment for NTBFs to secure their survival.

Furthermore, the prior investigations remark high failure rates among NTBFs (see, e.g., Gilbert et al., 2006; Bollingtoft, 2012). Rubin and his colleagues (2015) mention four reasons for the failures by the NTBFs:

- (1) High costs of research and development activities,
- (2) Difficulties in covering its expenditures,
- (3) Uncertainty in return on investment, and
- (4) Lack of managerial skills.

As mentioned in Chapter 1, the NTBFs suffer from three issues, viz. liability of smallness, newness, and liability in weak ties within their network in the early stage of their lifecycle (Witt, 2004; Neergaard, 2005; Bøllingtoft and Ulhøi, 2005; Fisher et al., 2013; van Weele et al., 2017). Thus, providing a supportive environment (as a significant approach for endorsing NTBFs) has been recognized as an essential solution to influence the rate of NTBF survival and their development (Bollingtoft, 2012). To reach such a solution, BIs have been created as an effective mechanism to support NTBFs especially in the early stages of their lifecycle, as a ubiquitous solution to decrease the risk of failure among NTBFs and as an accelerator for their evolution (Grimaldi and Grandi, 2005; McAdam and McAdam, 2008; Soetanto and Jack, 2013; van Weele et al., 2018).

3.2 Research Approach

Our research approach has two main goals. First, to map actual supportive activities offered by BIs to the NTBFs. Concerning the classification of BIs' research orientations, we refer to the orientations proposed by Hackett and Dilts (2004). Second, we are inclined to contribute to (a) the development of incubators and (b) the incubator-incubatee impact studies as seen through the incubatees' point of view. The research of this chapter is conducted in a region of the South Holland province in the Netherlands. In this region, two science-based universities (Leiden University and Erasmus University Rotterdam) and one university of technology (Delft University of Technology) are located together with a growing bio-science park (Leiden Bio-Science Park). In addition, there is quite a number of different business incubators in the three cities of this region: Delft, Leiden, and Rotterdam. We chose this region for our study as there is a well-formed regional ecosystem that attracts a sizeable number of entrepreneurs who establish NTBFs. For our research, we conducted a series of eleven in-depth semi-structured interviews with the founders of NTBFs who received support from UBIs. In Chapter 4, we will propose four propositions for future research based on our findings.

3.3 Research Methodology

To collect relevant data and information on the actual supportive activities of the UBIs, I conducted an explorative study and used a combination of observations, and in-depth, semi-structured interviews with founders of NTBFs in the UBIs. For obtaining more insights into the UBIs' supportive activities from the owners' perspective, I registered both as a co-founder of an NTBF and as a researcher in a four-month training program for entrepreneurs (e.g., Validation Lab/ Yes!Delft). Also, I joined the informal gatherings, meetings, and social events organized in the business incubators under study. During the participation in the training programs, social and informal events, the founders were asked (1) to explain what motivated them to choose to work in UBIs, (2) the sort of support they received, (3) their

expectations from a UBI, and (4) to what extent the activities lived up to their expectations.

To be more specific, the explorative study was conducted within two public UBIs in the same area of the Netherlands (Yes!Delft (Delft University of Technology Business Incubator), and PLANT (Leiden University Business Incubator)). Both universities are historical universities with their own emphasis (technical and general) in Europe with similar entrepreneurial perceptions (see Soetanto and van Geenhuizen, 2019). In addition, they are in close contact with a prominent organization of applied research (Nederlandse Organisatie voor toegepast-natuurwetenschappelijk onderzoek (TNO)) which aims are to employ the universities' research efforts to the industrial applications. In order to avoid the sample selection bias, I randomly selected the NTBFs from a variety of sectors to minimize the influence of possible selection bias. Then, I contacted a total of 35 founders in UBIs, of which 11 agreed to participate in the study. Three out of eleven founders were selected through social events, and the others were chosen randomly from the list of registered startups within the two incubators. Prior to conducting interviews, the interview questions were sent to the program managers of UBIs and their feedback was implemented. Moreover, at the beginning of each interview, the participants were assured about the confidentiality of the data and their anonymity. I interviewed the participating entrepreneurs over a period of seven months, starting in July 2015. The interviews took approximately 60 to 90 minutes. Each interview was recorded and transcribed. Next, I coded and categorized the transcription of the interviews in order to enable further analyses. I used a web-based tool for the analysis of our textual data (<http://www.saturateapp.com/>). Table 3-1 provides general information on the sample. The order is by the age of the foundations. The first column contains the initials of the NTBFs, which are used to identify the quotations of entrepreneurs in section 3.4. The participants were assured of maintaining their confidentiality and using the data in an ethical manner. Thus, we use initials of the NTBFs in the following Table.

Table 3-1: General Characteristics of the NTBFs under Study

No	Initials of NTBF	Industry	Number of current employees	Foundation
1	PI	Management Consulting	1-10	2004
2	BI	Environmental Services	24	2009
3	TM	Aviation & Aerospace	8	2011
4	N	Information Technology and Services	5	2013
5	MO	Internet	5	2013
6	SK	Mechanical / Industrial Engineering	5	2013
7	SH	Computer Networking	8	2013
8	SY	Biotechnology	2	2014
9	SP	Computer Science	3	2014
10	F	Biotechnology	2	2015
11	B	Life Science	2	2015

On the basis of our interviews, I identified a total of 36 codes for activities. Subsequently, I was able to classify them into 5 different categories (see Appendix A). They were labeled as:

- 1) access to the networks;
- 2) knowledge development and dissemination;
- 3) finance and administrative mobilization;
- 4) growth control; and
- 5) creation of exposure.

The identified categories will be elaborated in Section 3.4.

3.4 Field Work

The motivations of NTBFs to move to UBIs is presented in subsection 3.4.1, and the analysis of the conducted interviews is given in subsection 3.4.2. Then, we make a linkage between resource categories and identified activities, which is elaborated upon in subsection 3.4.3.

3.4.1 Motivation of NTBFs to Move to UBIs

The interviews started with highlighting the main reasons why entrepreneurs decided to join a UBI. The analyses of our interviews show that eight entrepreneurs were triggered by the access to the business incubators' networks. Their motivations were: (a) to have access to the networks with potential investors, (b) possible coaches, and (c) access to a strong network of clients. Clearly, these three motivations were preferred above a proper workplace. In line with our findings, Grimaldi and Grandi (2005), and Soetanto and Jack (2016) explained that an important reason for NTBFs to choose one particular UBI is their expectations from synergy (generated among tenants) and cooperation with other firms. Concerning the other motivations, three entrepreneurs claimed that the reputation of the UBI impacted their decision to select and work in a UBI. Six entrepreneurs indicated that access to administrative facilities, and affordable offices motivated them to join a UBI. This motivation aligns with the findings of previous studies (e.g., Chan and Lau, 2005; Bollingtoft, 2012). For one entrepreneur, the idea of working in an environment which provides the entrepreneurs with more structure and discipline, was a key motivation to move into a UBI. Finally, three entrepreneurs claimed that the type of industry that incubators select and the high rate of successful ventures in UBIs, encouraged them to work there.

3.4.2 Supportive Activities

The interviews with founders concentrated on the identification of the UBIs' supportive activities through the theoretical lens of the RBV. The results of data analysis show that the UBIs support their tenants through five activities embedded in a networking environment. They are: (1) access to the networks, (2) knowledge development and dissemination, (3) finance and administrative mobilization, (4) growth control, and (5) creation of exposure. Each activity is discussed in more detail below.

Activity 1: Access to the Networks

As mentioned above, the interviews show that entrepreneurs are very much triggered by the access to different networks as offered by the UBIs. Both the internal

and external networking opportunities seem to be fundamental support activities of the UBIs. One entrepreneur stated this as follows.

SK: "Here [the UBIs] supports us with their networks, and their partners help you. They [the UBIs] are constantly looking for big companies and other venture capitalists and do partnership with them. Here UBIs are connecting with big corporations and get these relations and connections. I noticed running a company which is really new to us, we have to learn huge number of things, in that sort of time and being here links you to companies to provide you services very useful to fill this gap."

TM: "There is a huge benefit to be together in a building, sort of the ad hoc communication between them, informal helping of companies among themselves, being around peers running start-up is a life consuming thing but it is easier to be surrounded with people who also have this, and there is a benefit in building your marketing power... and here there are some companies in our industry and we are thinking about partnership to produce similar product."

The incubators' connections provide an opportunity for tenants to broaden their own networks, and connect them with potential partners, and customers. For UBIs, the first step to have impact, is providing access to potential partners and customers by holding formal and informal events and gatherings. Formal events with the presence of large companies related to tenants' industries, and venture capitalists will help entrepreneurs to connect with potential customers and partners. Subsequently, it will lead to mutual cooperation. Partners of UBIs may help tenants to broaden their networks and enhance the founders' knowledge. Founders also regard the access to networks as an opportunity for knowledge development.

Activity 2: Knowledge Development and Dissemination

Many founders of NTBFS lack relevant knowledge in relation to business issues. Therefore, incubators attempt to address this inconclusiveness through functions such as coaching and business advice. The interviews show that incubators develop entrepreneurial knowledge by organizing workshops and seminars.

MO: "Here [UBIs] offers different workshops regarding to business, writing business plan, legal, accounting,... they are in form of class, and sometimes they provide coaches which is more interactive than classes... there are bunch of companies here you can talk with different fellows to tell on business side and tell you how to work, develop your business... it is a good point of networking here to learn how to set a company, find partner for our company or investors..."

Moreover, in collaboration with UBIs' industrial and academic partners, they provide tenants with access to coaches. As mentioned earlier, socializing and interacting within internal networks such as tenant to tenant, as well as UBIs' informal events, might lead to knowledge development. This type of knowledge development self-identity be regarded as 'learning by interacting'. Knowledge development and its dissemination are also stimulated by the use of mentors. Mentors support mentees through both psychological support, and career development support. On the basis of our interviews, it appears that UBIs are more inclined to offer coaching services than to engage their tenants in mentoring. Two opinions of the entrepreneurs are as follows.

MO: "Their [UBIs] mentoring is more like classroom lectures and you don't get that level."

SH: "If I get a mentor, I would like to get someone who, when he gets back to you, knows your story. They [incubators' mentors] do not have to be here every time, but once in a month so could advice you better to take a right road...Here we do have advisors, but we get a mentor by ourselves not incubator to meet him each two week. I think this type of coaching is more helpful than asking once a question."

Activity 3: Finance and Administrative Mobilization

UBIs provide entrepreneurs with the access to both financial and non-financial facilities, such as basic infrastructure, shared meeting rooms, administrative services, and offices. In addition, UBIs provide tenants with access to capital via their networks with the venture capitalists, and private capitalists. Below, we present two opinions.

MO: “They [UBIs] have investment meet ups (...). Basically, all they [UBIs] give you is free coffee and a desk in a stale room.”

SH: “They [UBIs] will invest through convertible loan which you don’t have to pay back directly.”

According to the founders’ opinions, the majority of the efforts by UBIs concentrates on providing their tenants with a place to work, and the access to the capital and investors. Sometimes, UBIs may also offer loans to incubatees, and provide access to the philanthropy and Governmental financial programs. It also appears that the networks of the UBIs especially with corporates, can lead to the strategic alliances between corporates and NTBFs. Thus, through this way they could raise funds.

Activity 4: Growth Control

After the selection phase of NTBFs, UBIs will start providing supportive activities for the accepted ventures. The growth control activity is offered by the UBI management team and evaluates the performance of their tenants. Our interviews reveal that this activity includes three dimensions (auditor role, facilitator role, inspirational role).

The first dimension is assigning milestones for incubatees to measure tenants’ growth. We call this dimension the ‘auditor role’.

The second dimension is interacting continuously and actively with incubatees to ensure the qualities of services and exploring their requirements. We call this dimension the ‘facilitator role’.

The third dimension is performing as a mentor for UBIs’ managers, i.e., providing psychosocial support for their tenants. This might have a reasonable impact on the performance of an NTBF. It means that the behavior of their tenants influences the self-identity of the business owners. Moreover, the third dimension has a potential to teach the entrepreneurs on how to overcome challenges and how to make strategic decisions. We call this dimension the ‘inspirational role’. Two entrepreneurs indicated this as follows.

SP: "The incubator manager contacts us regularly to see our problems (...). Also, every three months we have a review program."

SY: "They monitor us and introduce us to other startups to talk with them and share our experiences."

The more active the monitoring and cooperation with the tenants is, the better the evaluation of their performance will take place. Indeed, our data analysis demonstrates that active monitoring can help the team of incubators to provide related networks for their tenants. In addition, the team members have the option to support their tenants with more related and required training programs. Also, assisting the tenants can be seen by their potential customers through different channels of media. The team members can provide more psychosocial support for entrepreneurs.

Activity 5: Creation of Exposure

Our data analysis identified a new supportive activity offered by BIs. Previous studies show that due to the liability of newness, new ventures have less credibility than more established firms (see Witt, 2004; Bott, 2014). Our interviews show that UBIs can help new ventures to overcome their liability of newness and create more exposure by channels of social media, newspapers, technology and innovation-oriented press. Two opinions are as follows.

SP: "Here [the UBIs] has a team for marketing ... They [the UBIs] do not market your product but help you by tweeting and bring your product in the media.... the more exposures for us, our customers take us more seriously... I [founder] have got credibility from them [the UBIs] ...we get lot of publicity, this thing is the exposure, and introduce you to customers..."

SH: "Because of the exposure, we have received different offers to use our product."

The analysis of our interviews reveals that creation of exposure activities for NTBFs help them to be seen by their potential partners, customers and investors. It appears that the main reason that motivates founders to join BIs, is to obtain access

to their required networks. Hence, creation of exposure will help founders to broaden their networks and reach their target market.

3.4.3 The Relations between Resource Categories and UBIs' Activities

Table 3-2 depicts an overview in four columns of the six types of resources provided to the tenants of the UBIs (column 1, also including the tangible and intangible resources). We aim to show the relations between (a) the six categories of the firms' resources (column 2) and (b) the supportive activities by UBIs (column 3). In column 4, we provide the benefits of the activities. We adapt Grant's (1991) findings on the categories of the most important resources of the firms. He classified resources into tangible and intangible (column 1). With regard to the Grant's (1991) resource classification (column 2), we discuss them all below. First, the financial resources refer to provide funding and capital for NTBFs, whereas the BIs act as a facilitator to link entrepreneurs with different funding sources. Second, physical resources include assets such as shared meeting rooms, offices, shared facilities, and administrative services. Third, in our study, we define knowledge resources as providing tenants with different training programs to increase the knowledge of the founders. Fourth, relational resources include assets such as reputation and visibility. Fifth, organizational resources refer to the regulations and evaluation programs of UBIs for their tenants. It consists of the act of monitoring and participation in the tenants' growth processes, performance measurement, and establishment of success criteria. Sixth, human resources include all the individuals, and talent managers of UBIs, and the experts of UBIs' networks who collaborate with incubators to provide services for tenants. Access to the coaches, investors, on-site business expertise, and UBI's management team, are included in this resource.

Table 3-2: The Portfolio of Supportive Activities by UBIs

Category of resource	BI activities	Functions	Benefit of the activities
Tangible resources	Finance and administrative mobilization	- Arrange investing and fund-raising meetings with corporations and VCs - Provide loans	Access to capital
		- Provide a place to work/ shared administrative services	Access to basic infrastructure Access to facilities
Intangible resources	Knowledge development and dissemination	- Arrange Training programs (seminars, workshops...) - Coaching/ Mentoring	Increase business/ technical skills of founders and NTBF's team members Access to the coaches, mentors, experienced entrepreneurs
	Creation of exposure	- Market NTBF through social media, press, meetings and exhibition with big corporates	Increase NTBF's credibility & reputation
		- Organizing relevant events - Contact with potential investors/ customers/ partners	Access to investors, potential employees, potential partners, and clients
	Growth control	- The act of evaluating tenants' performance, and identifying their requirements	Providing more focused services with regard to the tenants' requirements.
	Access to the networks	- Organizing different events	Access to HR, investors, etc.

By our interviews, observations from UBIs and active participating in the UBI programs, we established the functions by which the UBIs deliver their support to their tenants (see column 3). Column 4 describes the functions more precisely. Column 5 explains which benefits the NTBFs may have from the access to the different supportive activities by BIs for NTBFs.

At this point, we are able to answer RQ1 (see the beginning of chapter 3). The final answer is in section 3.5.

3.5 The Answer to RQ1

This chapter has addressed *RQ1: What are the main supportive activities offered by UBIs that influence the performance of NTBFs?*

Our first finding is that the main supportive activities of UBIs are classified into five groups: (1) *access to their networks*, (2) *knowledge development and dissemination*, (3) *finance and administrative mobilization*, (4) *growth control*, and (5) *creation of exposure*.

Second finding is to identify the nature of activities of UBIs through the lens of RBV. On the basis of our data from eleven different cases, we showed that access to the networks of the UBIs, such as investors and UBIs' coaches, motivates founders to work in the UBIs. Although Chan and Lau (2005) found that networking activities offered by UBIs are unimportant, our analysis illustrated that networking and access to the different networks are very important items. This argument is in line with the findings by Bøllingtoft (2012), and Soetanto and Jack (2016) as well. Based on our observations, we may conclude that access to different networks is more important than access to the other type of supports for NTBFs. It appears that the priority of working in UBIs as previously shown by founders has been shifted from access to basic facilities and infrastructure to the networks and active mentoring. Our analysis revealed that the majority of UBIs' activities (resource mobilization, knowledge development, and creation of exposure) is offered through the networks and networking activities.

With regard to the role of UBIs' management team in facilitating the access to different resources for NTBFs, the entrepreneurs highlighted the importance of active monitoring and participation of UBIs' team within NTBFs' functions. The active participation by incubators enable them to provide more specific services for entrepreneurs (1) to meet their requirements, (2) to make a linkage between founders and their relevant networks, and (3) to provide NTBFs with their required sources.

Furthermore, our analysis showed that founders expect from incubators to help them to get access to their potential customers. We identified that UBIs use their media for announcing and marketing their NTBFs to help them to be more visible. More exposure will help the NTBFs to get noticed by their potential customers and investors. Thus, it increases the probability of NTBFs' capability and their success.

In the third finding, we faced two limitations. Although we consider NTBFs located in UBIs from different industries, the results should be generalized with caution. (3A), we only conducted our study in University-based BIs, thus, we do not know that our results are applicable in other types of BIs. In addition, the UBIs that operate only in a specific industry, for instance, Bio-science or Healthcare, may provide another sort of supports to their NTBFs. (3B), the cases analyzed are from the same country. Hence, the results from other nationalities and innovation regions can be different.