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Comparative Analysis of Public and Private Start-up Incubators (From a Users' Perspective)

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Comparative Analysis of Public and Private Start-up Incubators (From a Users' Perspective)

By

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Abstract

The emergence of technologically oriented small business ventures referred to as start-ups has brought in another global trend, the emergence of start-up incubators. Although business incubators have been present since the 1950's, their importance has never been greater. Local governments, as well as private entities, have recognized the importance of business incubation as a driving force of innovation and the economy as a whole. This qualitative study is focused on examining experiences of tenants located in two start-up incubators in the city of Zagreb – public Tehnološki Park Zagreb – The Technology Park Zagreb incubator, and privately owned Zagrebački Inkubator Poduzetništva – Zagreb Entrepreneurship Incubator. Examining and comparing the two Zagreb incubators provided insight on the quality of services and support that are offered to Zagreb start-ups, while taking their tenants' expectations into account, as well as their motivations for joining. The goal of this study was to gain deeper understanding of the process of incubation in two Zagreb start-up incubators, as well as to examine possibilities for further improvements of their programs.

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1. Introduction

In the past few years, the term start-up has been used with increasing frequency to describe young business ventures that are usually technologically oriented (Robehmed, 2013). Young entrepreneurs face a lot of challenges and difficulties while starting their companies for the first time. Start-up incubators are devices used by these entrepreneurs "to assist in the start-up and early development stage of their firms by providing workspace (on preferential and flexible terms), shared facilities and a range of business support services" (OECD, 2010, p.1). Range of services these institutions provide vary depending on the type of tenants they cater to, available resources and funding, as well as geographical region and specific policies of different countries (Ayatse, Kwahar, & Iyortsuun, 2017, p. 1-2). This study explored the scope of services and support Zagreb incubators provide to their tenants using a qualitative approach.

1.1. Problem statement

Young entrepreneurs in Zagreb are facing the same problems and challenges as their global peers, while starting their business ventures. In Zagreb, they have two start-up incubators at their disposal – one of them is public (Tehnološki park Zagreb – The Technology Park Zagreb) and one of them is private (Zagrebački Inkubator Poduzetništva – Zagreb Entrepreneurship Incubator). Conducting a qualitative study through interviews with representatives of Zagreb start-up companies that use these services provided a deeper understanding of business incubation options offered to Zagreb start-ups. This study also examined the perceived quality of support and services that Zagreb public and private start-up incubators have to offer to their users.

Examining and comparing the quality of support and services of Zagreb public and private start-up incubators shed light on similarities and differences in their approaches. It also

offered insight into young entrepreneurs' levels of satisfaction with what is at their disposal, and the possibilities for further improvements, as well as their motivations for joining start-up incubation programs.

1.2. Review of Past Studies and Deficiencies

Interest in the topic of business incubation has been growing as business incubators have been recognized worldwide as a valuable asset for coaching and growing young business ventures. Theodorakopoulos, Kakabadse, and McGowan (2014) found that research in this domain, while growing steadily, is still struggling with "definitional incongruence, descriptive accounts, fragmentation, and lack of strong conceptual grounding" (p. 602).

Tavoletti (2011) points out that there are no clear guidelines for establishing business incubators, and puts emphasis on the importance of such guidelines:

> Such guidelines are urgently needed because there is increasing evidence in the literature that despite many successful cases and public policies supporting business incubation, most of business incubators are not successful at all and serious doubts have emerged about the general effectiveness of business incubation. (p. 423)

On the other hand, Ayatse, Kwahar, and Iyortsuun (2017)'s review of business incubator studies states: "evidence shows that the incubation process improves firm performance" (p. 10).

Categories of services business incubators provide to young business ventures found in previous studies can be summed up in three broad categories: infrastructure (Arlotto, Sahut, & Teulon, 2011, p. 346; Carvalho & Galina, 2015, p. 258; Chan & Lau, 2005, p. 1227), business support/services (Caiazza, 2013, p. 1062; Carvalho & Galina, 2015, p. 259; Deák & Podmetina, 2013, p. 3), and access to networks/networking (Carvalho & Galina, 2015, p. 260; Deák & Podmetina, 2013, p. 3; Pettersen, Aarstad, Høvig, & Tobiassen, 2016, p. 2).

Previous studies that address the effectiveness of business incubation and services incubators provide are based on interviewing business incubator's managers (Al-Mubaraki & Busler, 2014; Al-Mubaraki, Muhammad, & Busler, 2015; Anderson & Al-Mubaraki, 2012; Carvalho & Galina, 2015; Himanen, Au, & Margulies, 2011; Isabelle, 2013) and tenants of business incubators (Arlotto, Sahut, & Teulon, 2011; Chan & Lau, 2005; Deák & Podmetina, 2013; Himanen et al., 2011; Pettersen et al., 2016). Methodology approach that is predominately used is qualitative (Al-Mubaraki et al., 2015; Anderson & Al-Mubaraki, 2012; Carvalho & Galina, 2015; Chan & Lau, 2005; Deák & Podmetina, 2013; Himanen et al., 2011; Pettersen et al., 2016). Previous research shows that a qualitative research approach has proven to be successful in examining and defining the scope of services business incubators provide. Studies that focused on interviewing business incubator tenants yielded more detailed and comprehensive results. A lack of research on business incubators in Central Europe is noticeable.

1.3. Significance of this Study

There has not been a study of this type conducted in Zagreb or Croatia in general. Considering that start-up incubators are accepted as efficient tools for helping young entrepreneurs develop their business ideas worldwide, conducting this study in Zagreb will provide insight into quality of services provided in the city of Zagreb.

1.4. Purpose statement

The purpose of this study is to explore how public and private start-up incubators are providing services and support to their users in Zagreb. The objective of this study is a deeper understanding of possible similarities and differences of approaches, and perceived quality of content that Zagreb public and private start-up incubators offer through the eyes of their users.

1.5. Research Questions

The main research question this study addresses is:

What are the differences and similarities of services and support that public and private start-up incubators provide to their users in Zagreb?

Additional research questions are:

1. How do users of public and private start-up incubators in Zagreb perceive support and services provided to them?
2. What motivated Zagreb start-up's to join a start-up incubator?
3. What further improvements could be made in the way public and private incubators in Zagreb provide services and support to their users?

2. Literature Review

Start – up incubators are recognized by different names in the literature. The two most commonly used terms are business incubators (Al-Mubaraki & Busler, 2014; Caizza, 2014; Carvalho & Galina, 2015; Phan, Siegel, & Wright, 2005) and technology incubators (Chan & Lau, 2005; Mian, Lamine, & Fayolle 2016; OECD, 2010; Sherman, 1999). The idea of business incubation is not new. The first modern business incubator was established in 1959 in New York (Industrial Center in Batavia) (Isabelle, 2013, p. 17; Mian et al., 2016, p. 1), while the first modern research park was established in California in 1951 (The Stanford Research Park) (Mian et al., 2016, p.1).

Phan, Siegel, and Wright (2005) define business incubators as "property-based organizations with identifiable administrative centers focused on the mission of business acceleration through knowledge agglomeration and resource sharing" (p. 167). They especially underline the embryonic nature of those facilities, since that they are often established by

universities and governments, which are non-profit entities (Phan et al., 2005, p. 168). In most cases incubators are the result of private-public partnerships; however, some smaller portion is privately owned (Tavoletti, 2013, p. 424).

Phan et al. (2005) recognized incubators as distinct organizations within the technological entrepreneurial value chain "whose activities are linked by the successive transformation of resource and knowledge inputs to marketable outputs in the period leading to and shortly after the creation of a new firm" (p. 170). Governments, corporations, and universities worldwide recognized the importance of business incubation as a way of "laying the foundations for new wealth creating industries" (Mian et al., 2016, p.1) in order to "enhance economic development and create jobs" (Isabelle, 2013, p. 16).

2.1. Evolution of incubation programs

Since the first incubator in Batavia was founded in the 50's, a lot has changed in the way organizations approach business incubation. Sherman (1999) identified three major types of incubation programs: empowerment, technology, and mixed-use (Sherman, 1999, p. 119). Empowerment incubators foster growth in high unemployment areas, technology incubators are supporting technology firms and are usually associated with major universities, while mixed-use incubators encourage the growth of all kinds of businesses (manufacturing and construction firms, wholesale, distribution, mail order and professional services) (Sherman, 1999, p. 119). Similar to Sherman (1999), Al-Mubaraki, Muhammad, and Busler (2015) identified three incubator categories according to their goals: "economic development incubators, technology commercialization incubators and entrepreneurship incubators" (p. 6).

According to Mian, Lamine, and Fayolle (2016) development of the model of business incubation has gone through three phases or waves: in the first wave, incubator programs aimed

at economic restructuring and job creation, by offering affordable space and shared services; the second wave was characterized by the research/science park model that operates as a network commercialization enabler, focusing on value-adding services such as counseling, skill enhancement, and networking; the third wave is characterized by multi – purpose mixed use science and research parks, specialized incubators, innovation centers, and accelerators.

Carvalho and Galina (2015) took a similar approach to the evolution of business incubation models. The first generation of incubators is described as a supply of infrastructure and space, while the second generation is more technology and coaching oriented. The third generation of incubators presents “a full variety of services directed for development of knowledge-based businesses” and also supports businesses “in a process of internationalization”, while the fourth, Dot.com generation, reveals a “strong venture capital orientation and shorter incubation periods” (Carvalho & Galina, 2015, p. 258).

Over time, business incubators evolved from simple providers of development services for new businesses, into tools that “promote a diversified industrial base for regional economies, stimulate job creation, and development of technology clusters” (Caiazza, 2013, p. 1062). The end goal of every incubation program is to achieve “economic development, innovation, technology transfer, and fostering entrepreneurship” (Al- Mubaraki & Busler, 2014, p. 49).

2.2. Key services incubators provide

Incubators offer two types of benefits to their tenants: tangible and intangible. Key services of a business incubator can be summarized as follows:

1. Infrastructure. Business incubators provide basic structural resources (Chan & Lau, 2005, p. 1227), such as inexpensive office space and sharing resources (Arlotto et al., 2011, p. 346; Carvalho & Galina, 2015, p. 258), and small workshops and premises

for prototyping or small-scale production (Deák & Podmetina, 2013, p. 3). They also offer services like reception, secretarial services, parking and meeting rooms (Carvalho & Galina, 2015, p. 258; Deák & Podmetina, 2013, p. 3).

2. Business support/services. Business incubators provide knowledge based services (Carvalho & Galina, 2015, p. 259), like coaching and training to their tenants (some incubators have in-house coaches, some hire outside coaches). Some incubators organize frequent group training sessions, while some go for a more personalized approach for individual tenants (Deák & Podmetina, 2013, p. 3). Coaching is identified as one of the key elements that "accelerates tenants learning skills and development processes" (Carvalho & Galina, 2015, p. 259). Incubators also help companies to "prepare their business plans, provide legal assistance, and advice for drafting licensing agreements aimed at protecting intellectual property rights" (Caiazza, 2013, p. 1062).
3. Access to networks/networking. Incubators provide access to internal networks among tenants, as well as external networks that are facilitated by the incubator (Pettersen et al., 2016, p. 2). Networking offered by incubators includes a range of professional business services like consulting firms and insurance companies. They also provide access to universities and academic networks, potential investors, and encourage cooperation between their tenants (Deák & Podmetina, 2013, p. 3). Networking allows companies to "benchmark with their peers", share experiences and useful tips, "catch inspiration" and "develop common ideas that will benefit the regional system for innovation and the end – users of incubation" (Carvalho & Galina, 2015, p. 260). Access to potential investors is crucial for young start-up

companies, while “pilot customers provide feedback on products and technology and help define the potential market and target customers” (Pettersen et al., 2016, p. 6).

Carayannis and von Zedtwitz (2005) identified five defining services of incubation business models: access to physical resources, office support, access to financial resources, entrepreneurial start-up support, and access to networks (p. 104). They argue that organizations that provide less than five of the stated services should not be considered incubators (Carayannis & von Zedtwitz, 2005, p. 105).

Naturally, the quality and the extent of services incubators provide vary and are dependent on numerous factors. Anderson and Al-Mubaraki (2012) show in their case study of The Gateway Innovation center in Escondido, how a lack of planning, expertise, and due diligence can contribute to incubator failure. Even though the local government was supporting the project, most of the key factors were ignored. The project eventually failed to attract start-ups because physical resources were lacking, there was no clear strategy how to run a business incubator, and staff had no experience in supporting young developing businesses (Anderson & Al-Mubaraki, 2012, p. 213).

Al-Mubaraki and Busler (2014) indicated that the success of an incubator is highly dependent on “clear objectives, incubators location, and access to services, employment creation, and economic development strategy” (p. 47). Sherman (1999) especially emphasized: “the success of an incubated business depends on the degree to which incubation staff understand and cater to their clients’ needs” (p. 131). Arlotto, Sahut, and Teulon (2011) found that the success of an incubator is also greatly dependent on the funds it can allocate to its business assistance programs (p. 343).

Isabelle (2013) identified five additional key factors that influence incubator success and appeal: the stage of ventures, fit with incubator's mission, selection and graduation policies, services provided, and a network of partners. Early stage ventures have significantly different needs than ventures that already have a finished product and some initial sales and incubators have to adjust their approach accordingly regarding the range of services and support they offer (Isabelle, 2013, p. 18). Isabelle points out that incubators are more suited for very-early-stage ventures, while accelerators tend to focus more on growing a firm quickly (p. 21). In her study, Isabelle also found that entrepreneurs prefer to settle in an incubator that is similar to their mission and goals (better fit). Fit between the entrepreneur's needs and incubator's mission, purpose, and sector focus is vital for successful incubation (Isabelle, 2013, p. 19).

Although most incubators today are mixed-use oriented, there is a "growing trend toward incubation in specific industry sectors" (Isabelle, 2013, p. 19). Modern incubators have started applying selection criteria to ensure that the firms they take in and support "fit" their overall mission and goals (Isabelle, 2013, p. 19).

2.3. Incubator tenants' expectations

Tavoletti (2013) identified four distinct categories of companies that can be found in incubators based on their maturity: (1) anchor tenants usually just use incubator facilities, pay their bills on time, and are not really interested in co-production; (2) long shots are defined as companies that have substantial need for co-production and benefit from the supportive environment offered by and incubator while they mature; (3) up-and-comers are companies with substantial resource gaps and recognize the potential of co-production; (4) superstars are companies that have matured and are likely to graduate from the incubator in the near term and act as role models for up-and-comers and long shots (p. 432). Different studies have shown that

business incubator tenants' expectations vary greatly in different countries (Chan & Lau, 2005; Deák & Podmetina, 2013; Himanen et al., 2011).

Most young businesses and start-ups state that decreasing expenses and affordable workspace is one of the key factors for entering a business incubator (Chan & Lau, 2005, p. 1225; Deák & Podmetina, 2013, p. 13). Other stated reasons are transfer of business knowledge, consultancy and services, networking and cooperation (Chan & Lau, 2005, p. 1225, Deák & Podmetina, 2013, p. 13).

Choice of incubator can also be influenced by a favorable location, incubator image and perceived quality (Chan & Lau, 2005, p. 1225; Deák & Podmetina, 2013, p.14). In their study, Carvalho and Galina (2015) found that prestige and the image entrepreneurs can achieve through being associated with a specific incubator was listed as one of the important motivating factors for joining an incubator (p. 262). Carvalho and Galina (2015) also found that the prospect of internationalization was a motivating factor for some start-up's (p. 262).

Pettersen, Aarstad, Høvig, and Tobiassen's (2016) study of network resources of start-ups showed that while start-ups valued some of the perks of incubator enabled networking (external network resources, market access and sharing tips on administrative obstacles), they were reluctant to share their business secrets and their own network resources (p. 8). Chan and Lau (2005) reached a similar conclusion in their study of Hong Kong start-ups. While tenants of Hong Kong Science Park incubator were mostly satisfied with the infrastructure and some business support services, they were generally not impressed with marketing events, press conferences, and meetups. They also reported that there was little to no interaction between start-ups. The study showed that "networking and clustering are ranked the lowest according to the value that would contribute to the business development process" (Chan & Lau, 2005, p. 1226).

2.4. Summary

The phenomenon of business incubation has evolved greatly since its inception in Batavia (Isabelle, 2013, p. 17; Mian et al., 2016, p. 1). While the first business incubators focused on providing infrastructure such as office space and business support, today's incubators have greatly expanded their offerings. Taking into account that the business start-up model is on the rise and is a go-to choice of many young entrepreneurs, it is to be expected that today's incubators offer a variety of services and support to their tenants. Providing infrastructure, business support services and networking opportunities is a given, and it has to be enhanced with strong mentoring programs, education, university collaborations as well as providing funding and helping with the internationalization of young business ventures.

While incubators are working on diversifying their offerings, it is interesting to see that one of the primary reasons why start-ups choose to enroll in their programs still boils down to affordable work space and business support services (Chan & Lau, 2005; Deák & Podmetina, 2013). While some tenants do mention geographical location as a plus, as well as the prestige certain incubators hold (Chan & Lau, 2005, p. 1225; Deák & Podmetina, 2013, p.14), it is interesting to see how they perceive more "social" aspects of the incubation program - networking.

Networking is considered important, but not as much as physical support. Networking, especially networking among their peers, on average does not seem to be a top priority for young start-ups (Chan & Lau, 2005, p. 1225; Pettersen et al., 2016, p. 8). This detail is especially interesting considering that young business ventures usually lack exposure and, therefore, business incubators, at first glance, seem like a perfect platform for gaining it. Educational and other non-business counseling support services were barely mentioned as deciding factors in

studies of this type (Carvalho & Galina, 2015; Chan & Lau, 2005; Deák & Podmetina, 2013; Himanen,et al., 2011; Pettersen et al., 2016). This study aims to address these issues and shed light on how incubator tenants perceive the quality of services and support offered to them, their motivations for joining the programs in the first place, as well as possible improvements of what is offered in their selected incubators, while keeping in mind that private and public incubators may differ in approaches.

3. Methodology

3.1. Research design

The research methodology used in this study was the qualitative research design, due to the necessity to get an in-depth understanding of the differences and similarities of services and support public and private start-up incubators offer to their tenants in Zagreb. Quantitative approach was considered but was discarded, because more valuable insights on this topic can be obtained through a qualitative approach, as demonstrated by previous studies (Al-Mubaraki et al., 2015; Anderson & Al-Mubaraki, 2012; Carvalho & Galina, 2015; Chan & Lau, 2005; Deák & Podmetina, 2013; Himanen et al., 2011; Pettersen et al., 2016).

Phenomenological qualitative research strategy was chosen because it is concerned with human experiences and strives to provide “a description of how things are experienced at first hand by those involved” (Denscombe, 2010, p. 94). Furthermore, phenomenology aims to provide “a clear picture of the “things in themselves” – the things as directly experienced by people” (Denscombe, 2010, p. 95). The objective of this study was to gather information and report on subjective experiences of Zagreb start-up incubator tenants, as seen from their unique perspectives.

The main research question this study addressed is:

What are the differences and similarities of services and support that public and private start-up incubators provide to their users in Zagreb?

Additional research questions are:

1. How do users of public and private start-up incubators in Zagreb perceive support and services provided to them?
2. What motivated Zagreb start-up's to join a start-up incubator?
3. What further improvements could be made in the way public and private incubators in Zagreb provide services and support to their users?

The study is comprised of in-depth interviews with tenants of one public and one private start-up incubator in Zagreb. The intent of this study was to obtain a more comprehensive understanding of the perceived quality and scope of the services and support provided in Zagreb start-up incubators. The phenomenological interview strategy ensured that "the essence or basic underlying structure of the meaning of an experience" (Merriam & Tisdell, 2015, p. 26) is captured adequately.

3.2. Procedure

Considering the phenomenological nature of this qualitative study, data was collected via in-depth interviews. Creswell (2007) states that the interview is typically used while conducting a qualitative phenomenological study (p. 121). Denscombe (2010) validates this position, by affirming that the interview method is considered most suited for "exploration of more complex and subtle phenomena" (p. 173).

The purpose of this study was to explore how public and private start-up incubators are providing services and support to their users in Zagreb, through the eyes of their users. Semi-structured interview method was used as it was deemed most efficient and appropriate. As

opposed to unstructured and structured interview methods, the semi-structured interview method "has a clear list of issues to be addressed and questions to be answered", but it is at the same time "flexible in terms of the order in which the topics are considered" (Denscombe, 2010, p. 175).

3.2.1. Participants

Participants of this study were two start-up companies enrolled in the ZIP (Zagrebački inkubator poduzetništva) program and four start-up companies that are part of the TPZ (Tehnološki park Zagreb). The initial plan was to interview three start-up companies from each of the incubators, but it had to be abandoned because of unforeseen circumstances which will be outlined in the next paragraph.

ZIP (Zagrebački inkubator poduzetništva) is a first privately funded start-up incubator located in Zagreb. It was founded in 2012 and its focus are South Eastern Europe's start-up companies. ZIP offers a four month intense program to their tenants for a fee. The program is based on educational workshops, bi-weekly reports, and mentoring (http://zipzg.com/en/). ZIP merged with HUB385, a co-working organization (https://hub385.com/), in 2017, and are yet to start a new incubation program because of restructuring. Considering that there are no current tenants in ZIP, two of their alumni companies' representatives were interviewed.

TPZ (Tehnološki park Zagreb) is a public business incubator owned and operated by the City of Zagreb. It helps young entrepreneurs develop their business ideas by offering workspace, technical support, business education, and consulting (http://www.tehnopark.hr/eng). In 2016 Development Agency Zagreb – TPZ Ltd. and the City of Zagreb started the Startup Factory Zagreb, a pre-acceleration program within the Technology Park Zagreb. Startup Factory Zagreb is the first publicly funded no equity program of its kind in the Zagreb area and in Croatia. Four

company representatives were interviewed within TPZ; three of them became TPZ members after participating in the Startup Factory Zagreb program.

Selection of participants for this study was by non-probability sampling. Denscombe (2010) states that the interview method is generally conducted with fewer participants "than would be the case with questionnaire survey" (p. 181). For the purpose of this study, selection of start-up companies was dependent on willingness of start-up companies themselves to participate. All the necessary approvals from relevant authorities in both start-up incubators (ZIP and TPZ) were attained beforehand. All potential participants were contacted via e-mail primarily, but also by telephone calls and social networks, in order to ensure their participation. The email (Appendix A) contained basic information about the study, intended goals and methods to be used, as well as researchers contact information and motivations.

3.2.2. Data collection

Data for this study was collected via conducting semi-structured interviews during February 2018, and it involved C-level representatives of each company. All interviews were recorded using an audio recorder and backed up by written field notes, as advised by Denscombe (2010) and Creswell (2007). One interview was conducted on site in TPZ. Five interviews were conducted via telephone, taking into consideration participant's schedule and availability. Conditions that Denscombe (2010) recommends regarding the location for conducting interviews: "should offer privacy, be fairly undisturbed, and reasonably quiet" (p. 182), were taken into account and respected. Average duration of interviews was 15-30 minutes.

In order to ensure the best possible results and data quality, interviews were conducted in one-to-one format (Denscombe, 2010, p. 176).

While conducting interviews the semi-structured format interview format was respected. Participants of the study were encouraged to share their experiences and observations on the subject, with the researcher keeping track of the discussion, in order to ensure that questions and topics that this study addresses are adequately covered. Interview skills as outlined by Denscombe (2010) were followed: a good interviewer needs to be attentive, sensitive to the feeling of the participant, be able to tolerate silence, use prompts, probes and checks, and ensure a non-judgmental atmosphere (p. 183). Throughout the interview process, the interviewer was attentive to encouraging "the right climate for an interviewee to feel comfortable and provide honest answers" (Denscombe, 2010, p. 179). Considering that four of the interviewed participants are still operating within incubators the researcher guaranteed that names of companies and participants will not be presented pertaining to given answers, nor mentioned in the study.

An interview protocol with a list of main questions was prepared in advance (See Appendix B). "Interview guide template" was used to prepare and formulate interview questions (Taylor, Bogdan, & DeVault, 2015, Appendix 2). Qualitative data used to help formulate interview questions was collected from incubators' websites (online documents) (Denscombe, 2010, p. 216). The ZIP (http://zipzg.com/en/) and TPZ (http://www.tehnopark.hr/eng) websites that were used in formulating interview questions, provided extensive information on the services and support they offer to their tenants.

3.3. Validity of the Study

Validity of the study "refers to the accuracy and precision of the data" (Denscombe, 2010, p. 298). Triangulation was used to enhance the validity of the interview data. Additionally,

interview transcripts were sent back to all the participants to check the accuracy of statements as well as to ensure that stated facts are correct.

The study was also sent to the research project mentor to assess and review the entire research process and obtained results. The researcher kept in mind the importance of acknowledging her own bias, values, and beliefs during the research process; please see Section 3.5 below.

3.4. Reliability of the Study

According to Denscombe (2010) reliability of the study refers to "whether a research instrument is neutral in its effect and consistent across multiple occasions of its use" (p. 298). In order to ensure reliability, all the steps of data collection were thoroughly documented, as well as data analysis procedures, as to allow for evaluation of the research process and reasoning behind conclusions that were made. Reliability of the study was further ensured by the research project mentor, who reviewed the list of codes, in order to increase the reliability of results.

3.5. Role of the Researcher

Qualitative research in itself is highly influenced by the bias the researcher brings (Creswell, 2014, p. 202, Denscombe, 2010, p. 301). Although researcher's values and beliefs can never be entirely eliminated, a level of objectivity and distance from the subject matter can be achieved. Motivation behind this particular study was curiosity and desire to shed light on a phenomenon that has not been researched in Croatia. Researcher has no ties to, nor inclinations to join a start-up incubator. None of the participants involved in the study were directly affiliated with the researcher. While conducting interviews, researcher was aware of potential limitations of "the interviewer effect", the phenomenon in which "the data are affected by the personal identity of the researcher" (Denscombe, 2010, p. 178) and strived to maintain a neutral presence.

3.6. Limitations

The primary limitation of this study was finding representatives of start-up companies that are using services of start-up incubators in Zagreb that were willing to participate. A further limitation was the restructuring process that was underway in the ZIP incubator. Considering that there were no active incubation programs open in ZIP during the period when the research was conducted, two ZIP alumni companies were interviewed. Openness and honesty of the participants has also proved to be a challenge considering that some of them were still enrolled in the incubator program during the interview period.

3.7. Data analysis

Data collected in this study consisted of recordings of interviews conducted with start-up companies' representatives. Creswell (2014) states that the purpose of data analysis is "to make sense" out of data by "segmenting and taking apart the data as well as putting it back together" (p. 195). Denscombe (2010) points out that in qualitative phenomenological studies "the description is valuable in its own right through the way it allows new insights to be gained", but descriptions are also used "as a starting point for research" (p. 235). Qualitative data analysis uses "words and visual images as units of analysis" (Denscombe, 2010, p. 237).

Analysis of the data collected in this study followed proposed steps from Denscombe (2010). Collected audio data was categorized and transcribed. In order to ensure the anonymity of participants, each transcript was assigned a special code starting from T1 for a company located in TPZ and Z1 for a company located in ZIP. Transcripts of interviews were sent back to all participants to check the accuracy of the statements as well as to ensure that stated facts are correct.

Considering that all the interviews were conducted in the Croatian language, researcher took great care in translating key sentences and concepts that emerged during conversations, in order to preserve original meaning and tone of participant's responses. Transcripts were read thoroughly and supplemented with researcher's field notes (Denscombe, 2010, p. 240) in order to gain a preliminary insight into topics that were discussed to identify "obvious recurrent themes or issues" (Denscombe, 2010, p. 240).

The coding process consisted of identifying and highlighting words and statements within transcripts and researcher's translations. Coding process was conducted using Microsoft Word. Detected codes were grouped into categories (themes) and outlined within transcripts and translations using color coding. Every new identified theme or code prompted the researcher to re-read and check previously analyzed data for overlooked information. When analyzing transcripts and translations, researcher repeatedly consulted audio recordings to ensure that participant's responses matched observed codes and categories (themes). List of themes and sub-themes produced by data analysis can be found in Appendix C.

4. Findings

The purpose of this study was to examine what are the differences and similarities of services and support that public and private start-up incubators provide to their users in Zagreb. The study also addressed how users of public and private start-up incubators in Zagreb perceive support services provided to them, their motivations for joining a business incubator, as well as proposed further improvements that could be made in order to (possibly) improve business incubators' services.

4.1. General information on startups involved in the study

A total of six start-up companies were interviewed in order to obtain data collected in this study. Four companies were located in TPZ (Tehnološki park Zagreb), a publically funded incubator (T1, T2, T3, and T4), while two completed the incubation program in ZIP (Zagrebački Inkubator Poduzetništva), a privately funded incubator (Z1 and Z2). All interviewed companies were from the IT sector. Five of them were developing mobile and web applications (Z1, Z2, T1, T2, and T4), while T3 was developing hardware solutions.

4.1.1. Stage of venture

Two interviewed start-ups were in the early stage of development (T2 and Z1). Z1 had a developed idea, and was considering developing a company that was subsequently founded during the incubation period in ZIP. T2 reported that their company was founded in TPZ. T3 and T4 established their companies before joining the incubator. They stated that their companies were in early stages of development.

T1 start-up was already an established company with a commercial presence. Z2 was an established company and is an outlier in this study. They stated, “Our company and the platform we were working on was not envisioned as a classical start-up”. They were intent on keeping intellectual property rights and were not interested in venture capital as they already had backing funds for initial operations.

4.1.2. Prior experience in other incubators

Three start-ups (T1, T3, and T4) joined TPZ through the Startup Factory Zagreb pre-acceleration program where they had to compete and win the opportunity to join the program. Startup Factory Zagreb teams are offered financial support and a ten week pre-acceleration

program that offered free office space, mentoring, and education. Before joining TPZ T1 start-up was located in HUB385, a co-working organization, which was secured by winning the Microsoft start-up competition in Croatia.

Z1 started developing their project in college where they had access to labs and workshops. They won the Zagreb Connect and joined the Core incubator, which is no longer active. They reported that their experience in the Core incubator was good; however, the location of the incubator was remote. After winning the Microsoft competition for start-ups, they used the funds to cover the cost of the entrance fee for ZIP. T2 and Z2 reported no prior experience in any of the incubators, co-working organizations or programs.

4.2. Services and support provided in Zagreb's start-up incubators

This section contains a detailed overview of all service Zagreb start-up incubators provide to their users as described by interviewed start up representatives.

4.2.1. Infrastructure

All interviewed start-ups used the provided incubator infrastructure to an extent. Four start-ups used office space and all the amenities provided (T1, T2, T3, Z1), while T4 and Z2 attended workshops, lectures, events, and meetings with mentors on site. T1, T3 and Z1 reported that they were extremely satisfied with their incubator's locations. All start-ups commended the overall feel and aesthetics of both venues.

4.2.1.1. Office space

In TPZ T1, T2, and T3 were using office space and all the amenities located within (office modules, printing services, communal space, Internet). Using TPZ office space was free for a year for T1 and T3, after finishing the Startup factory Zagreb program. T2 were paying

subsidized lease and pointed out that that was a deciding factor for joining TPZ, because “they were relieved of financial strains of running day to day operations”. Z1 was one of the rare start-ups that used office space in ZIP. They pointed out that relocating there was the main reason for the success of their project:

> We were one of the rare teams that relocated there and “lived” there. Only a few of us spent most of our time there. Others took it on as a side project and got lost in the process. In order to succeed you have to give 100%, or nothing.

4.2.1.2. Meeting rooms and Conference rooms

Start-ups located in TPZ in ZIP expressed great satisfaction with the space provided in the form of meeting rooms and conference rooms. Use of stated spaces was free for both incubators tenants. T1 pointed out that the “polished look” of TPZ space and meeting rooms was extremely important to them “in order to make a good impression on potential investors”.

4.2.2. Business support services

All interviewed start-ups mentioned the importance of business support services provided in both incubators, which they all used in varying degrees. Access to mentors and help with developing their projects was mentioned as extremely important. Both incubators organized workshops and lectures that covered a variety of general topics relating to the process of running a company (founding a company, marketing, how to get subsidies, etc.), as well as topic related to specific areas (IT, application development, design, and user experience, etc.). Services such as legal support were provided at both incubators. Accounting services were offered only in ZIP.

4.2.2.1. Mentors/Mentoring

TPZ and ZIP had widely different approaches to the mentoring process.

Mentoring in ZIP.

ZIP had a hands-on approach and provided dedicated mentors to their tenants. They were in direct contact with their main mentor in ZIP, as well as partner mentors who were experienced entrepreneurs and professionals. Part of the appeal of ZIP was access to the "best of the best" in Croatia (Z1). ZIP took in a small number of companies per generation, six when Z2 was enrolled in the program, and eight when Z1 was enrolled in the program.

The mentoring process consisted of finding "best fit" partner mentors for specific projects, as well as appointing a main mentor on site in ZIP. Z1 and Z2 state that they had bi-weekly meetings with their main mentor in ZIP where they had to deliver progress reports such as "contacting a certain number of potential investors or defining your target market" (Z2). Both Z1 and Z2 agreed that ZIP was extremely diligent in tracking their progress and setting specific goals in order to spur their project's development and growth. However, their impressions on the mentoring process are conflicting.

Z2 appreciated ZIP's commitment to setting goals and reporting on progress but emphasized tasks and goals were oriented on "more general questions". They were expecting a more hands on approach in regard to getting concrete solutions, answers, and recommendations for their project. Z2 described their expectations in these words:

> We were expecting something along the lines: "considering the specific services your projects offer, and subsequently, the technical solutions you can deliver, you should do this and this". We needed guidance regarding some issues and needed someone to tell us whether to go left or right. When we asked for guidance in such issues, we would always get the same response: "We can't help you with that, you will have to figure it out on your

> own". ZIP program was good if you just had an idea and had to give it shape, for us that was not enough because we already had a product, something tangible.

Z1 described ZIP's hands-on mentoring approach as "one of the best in Croatia, especially regarding to providing support in developing projects". Considering they had prior experience in Core incubator, their approach was that "you had to do some things on your own". In looking back to their experience in the Core incubator, ZIP had a better progress tracking and goal setting system in place. They were extremely satisfied with their dedicated mentor and all the support she provided. Z1 and Z2 were not enrolled in the same generation in ZIP, but they noticed that some star-ups were dissatisfied with the program:

> Some tenants were dissatisfied with the support and mentors because they were expecting a more hands-on approach. In a sense, they were expecting that someone will hold their hand during the process in all minute details. They needed someone to tell them exactly what to do with their projects, but no one can tell you exactly what to do. It all depends on how personally capable you are.

Z1 also remarked that each subsequent ZIP generation was "weaker", as well as that start-ups were "not ready to put in the work themselves". They concluded that stage of venture also influenced how much support each individual project needed.

Both Z1 and Z2 found their experiences with partner mentors as valuable. Partner mentors were experienced entrepreneurs and professionals who were at their disposal for questions and advice. This aspect of the mentoring program was of most value for Z1.They stated that it was a turning point for their project:

> We needed someone who could help us with user experience. Our application was extremely bad from a user experience perspective. After one lecture on user experience, we approached the lecturer and that was a turning point for our project. They gave us advice on how to make our application more user-friendly. ZIP enabled us to get in touch with experienced companies and experts; we couldn't have gotten that on our own.

Z2 described their experiences with partner mentors as satisfying, especially from a networking perspective. However, they did note that some of the mentors mentioned on the webpage never visited ZIP and were not easily accessible. Both Z1 and Z2 described advice that they received from partner mentors as invaluable.

Mentoring in TPZ.

TPZ offers access to mentors (both partner mentors and staff on site) to their tenants. As opposed to ZIP, they did not offer dedicated mentors, nor a hands on approach in the form of setting goals and progress tracking. T1, T3, and T4 got five mentor recommendations that were compatible to their projects while enrolled in the Startup Factory Zagreb program. They were free to contact them at will, as well as other mentors but no formal commitments were made. All TPZ tenants are free to contact any of the resident and partner mentors.

T2 reported that their interactions with mentors were scarce, because they "didn't feel the need to ask for specific help yet", but mentioned that mentors at their disposal were "good and covered diverse areas". T1 contacted mentors in the beginning of the incubation program, and found their help useful "in a general sense". T4 were satisfied with accessibility of TPZ mentors, but they were expecting more coaching and mentoring, especially in their pre-incubation phase. They got in touch with five mentors that were compatible with their project, but were hoping for

"a more hands on approach". T4 also questioned TPZ's insistence on mandatory attendance at lectures at workshops, as opposed to offering dedicated mentors:

> We would have liked that the emphasis was put on goals and tracking our progress, as opposed to attending workshops and lectures. Progress of your project is more important than being physically present at a lecture. How should we put it, if a lecture is interesting, you will attend of your free will.

4.2.2.2. Education

Both ZIP and TPZ organized workshops and lectures held by mentors and guest speakers on site. All interviewed start-ups confirmed that they found them useful and helpful in developing their projects. Start-ups enrolled in the Startup Factory Zagreb program had mandatory attendance, as reported by T4. Workshops and lectures covered diverse topics on general questions (how to start a company, marketing, how to get subsidies, etc.), as well as topics related to specific areas (IT, application development, design, user experience, etc.).

Z2 mentioned that interactions with lecturers helped them redefine their project. Z1 reported that ZIP hosted diverse lecturers and guest speakers from Croatia and abroad, as well as managers of other incubators, which subsequently helped them in deciding on another incubation program they enrolled in after their ZIP experience.

4.2.2.3. Legal services, Accounting

Legal and accounting services were supplied at ZIP, but both Z1 and Z2 stated that they did not use them because they were unnecessary at their stage of development. TPZ offered legal assistance within their organization. T2 and T4 reported using legal services within TPZ, and found them useful. TPZ did not supply accounting services, but were recommending outside firms that provided their services at a discounted rate.

4.2.3. Networking

All interviewed start-ups reported that networking was one of the key motivating factors for joining an incubator. Three levels of networking were identified during the interview process: networking with mentors, networking with other start-ups, and networking with potential investors.

4.2.3.1. Networking with mentors

All interviewed start-ups singled out the importance of networking with mentors that were involved in programs in ZIP and TPZ. Contact with representatives of mature companies and people that are experts in their respected fields provided all interviewed start-ups with invaluable advice and business connections. All start-ups reported that access to those people and organizations without the incubator support would have been extremely difficult, if not entirely impossible. Z1 reported that even informal meetings with mentors, such as having coffee, helped them in developing their project. When they had some contract issues with an outside firm, one of their mentors stepped in and resolved the situation. T1 pointed out that “you will always have contact information. You can always dial a number or send out an email to your mentor and ask for advice or a favor”. On the same note, T4 pointed out: “If I encounter some xy problem, now I have at least ten people I can contact and ask for help”.

4.2.3.2. Networking with other start-ups

Networking with other start-ups was an important and valuable experience for all start-ups involved in this research. Z1, Z2, T1, and T4 emphasized the importance of sharing ideas, knowledge, and experiences within incubators. T2 reported that networking with other start-ups in TPZ was extremely beneficial for their company. They outsourced IT support services to one of the start-ups they met in TPZ.

T1 defined networking as “sharing ideas, experiences and practical advice with people that are on the same wavelength as you”. Z1 described their interactions with other start-ups as a wholesome process:

> You become friends with someone and start helping them. We formed relationships that were more than friendships; those people become your mentors as well. It’s funny how you can get advice and solve your problems while playing table football.

4.2.3.3. Networking with potential investors

While stating their motivation for joining incubator programs, all start-ups emphasized the importance of access to potential investors. Z1 reported that they were very satisfied with the support they got in ZIP regarding this category. Z2 pointed out that they managed to substantially expand their network, but “none of those contacts turned into anything tangible”. Nonetheless, they enjoyed the process and found it a useful experience. T2 and T4 confirmed that TPZ organized networking events, but their impression was that TPZ did not provide enough help with meeting potential investors. T1 pointed out that, even though TPZ did not provide assistance with securing more tangible connections with investors, being enrolled in the program was beneficial:

> Being part of TPZ helped us in accessing some of our partners. Considering that we got backing form the City of Zagreb, companies that we wanted to sign up for our service perceived us more seriously. When you have backing from the City, you look more serious. You could say it helped in opening some doors, not fully, but at least a crack.

4.2.4. Other services

Other benefits and services mentioned during the interviews were financial resources and internationalization.

4.2.4.1. Financial resources

As stated before, T1, T3, and T4 were enrolled in the TPZ Startup Factory Zagreb program, which offered financial support. All interviewed start-ups enrolled in the program stated that that was their primary motivation for joining. As stated on the Startup factory Zagreb website “the amount of financial support per individual pre-acceleration program user is between 92.500 HRK and 190.000 HRK. Each of the winning projects can receive the maximum aid intensity of 90%” (http://startupfactory2017.tehnopark.hr/eng/What-is-Startup-Factory-Zagreb). T1 pointed out that TPZ funded only projects that were not already being funded by another entity. They found it problematic because this stipulation in the contract barred them from receiving additional funding while enrolled in the program. Even though all the services in TPZ were free of charge for them, they still had the feeling that they were, in a sense, paying for them. T2, the only TPZ start-up that was not enrolled in the pre-incubation program, mentioned that subsidized office space helped them immensely, and that they do feel like they received financial support from TPZ in a sense. They pointed out that “managing fixed costs of office space and infrastructure is a great weight on any start-up’s budget”.

ZIP incubator asked for an entrance fee of 3000HRK in order to join the program. ZIP offered financial support for the best start-up in every generation. Their website states that they will “finance 5 or 6 startups with up to 10.000 GBP “(http://zipzg.com/en/qa/). Investment was offered for up to 8% of the startup’s equity. Z1 pointed out that they were counting on receiving funding but ZIP never followed through with that offer. Z1 explained, “the prerequisite for

receiving funding was to be the best in a generation, and we worked really hard to get it, but they discontinued that program because they didn't secure enough funds". Z2 pointed out that their project did not require funding. However, other start-ups enrolled in their generation "counted on receiving some form of financial support in order to get their projects going". In their generation, only one start-up managed to procure outside funding with ZIP's help, but they did not consider it sufficient for development, as it was a sum of only 7000HRK.

4.2.4.2. Internationalization

T2 mentioned internationalization as one of the perks of being a member of TPZ. Even though their company was still not in a phase where they needed help with distributing their services in the EU market, they were counting on TPZ's help in later stages of development.

4.3. Start-up's perception of the incubation experience

All interviewed start-up's from TPZ expressed satisfaction with the overall experience in the incubator. T1 described it as a process of "creating something positive with people that are on the same wavelength as you are". Z1 described their ZIP experience as positive. They pointed out that ZIP was their first choice over TPZ because small incubators have "a family atmosphere where startups get a chance to form ecosystems".

Z2 was the only interviewed start-up that did not "get much from the experience". They did point out that the ZIP experience "helped in figuring out that we are not a typical start-up". Z2 noticed issues with the maturity of the program in ZIP. Z2 expressed it this way: "ZIP is good for projects that are simple and easy to define. That was not the case with our project". They were expecting a more mature and professional approach to mentoring and progress tracking. After ZIP, they joined the ABC Accelerator in Slovenia (https://abc-accelerator.com/slovenia/), which they described as a "more mature project". Z2 noted that,

while ZIP was not a good fit for them, they see the program as useful for start-ups that are starting from scratch and have no business background.

4.4. Motivation for joining the incubator

T1, T3, and T4 stated that their primary motivation for becoming members of TPZ was winning the Startup Factory Zagreb competition, and joining the pre-acceleration program. The Startup Factory Zagreb offered subsidies between 92.500 HRK and 190.000 HRK, which was a strong motivating factor for T1, T3, and T4. T2 is the only TPZ start-up that was not part of the Startup Factory Zagreb program. Nonetheless, financial support in the form of subsidized office space was their main motivator. Z1 team was hoping to win best start-up project in the generation at ZIP, which offered financial support.

All startups mentioned networking, business support services such as access to mentors, help with their projects, education, and access to potential investors as motivation for joining TPZ and ZIP. T1, T2, T3, and Z1 mentioned infrastructure, such as office space, free Internet and access to meeting rooms as extremely important factors for joining. T4 and Z2 reported that they did not require office space, as their teams were scattered across Europe, but T4 was motivated by access to meeting rooms and conference rooms. T1 specifically pointed out that they needed “aesthetically pleasing office space” for receiving business partners and potential investors. T1, T3, and Z2 were also motivated by the good locations of incubators.

Other factors mentioned were business support services such as legal assistance, coaching (T4 and T1) and logistics (T3). Z2 reported that their main motivating factor was flexibility of the ZIP program and staff. They considered joining incubation programs in Germany, but all of them insisted on physical presence in incubators for the duration of the incubation process; ZIP did not have such requirements. After consulting one of the ZIP founders, Z2 decided to join ZIP

primarily to “see what the incubation experience is like”. All start-ups were interested in experiencing and learning something new.

The dominant reason for joining the incubation program for the majority of interviewed start-ups was curiosity and seeing where the incubation projects could take them (Z1, Z2, T1, T2, T4). Z1 described it as going with the flow of their student project that “showed some promise”, and was subsequently abandoned, even though they founded a company during the incubation period. Z2 is a team of individuals that, which as they described it, “had a good and solid business idea that showed promise”. At the time they were interviewed they reported that they were “currently preoccupied with their “day jobs”, while their start-up is on pause”. T2 started their start-up in college and plan to maintain it as a side-job. T1, T3, and T4 just entered the incubation program while they were interviewed and, as stated before, they joined TPZ primarily because they won the Startup Factory Zagreb competition, which in turn entitled them to free office space and other amenities.

4.5. Improvements

Some of the suggested improvements that interviewed start-ups mentioned are, as follows:

4.5.1. Infrastructure improvements

T3 is the only hardware oriented start-up interviewed, and they noted the lack of “a lab and traditional workshops” which would “greatly improve the experience of start-up that are technically oriented”. They also noted that “the entrance to TPZ looks unfinished and aesthetically unappealing”. Z1 mentioned lack of space in former ZIP offices:

> The only problem was lack of space. In our generation, we had confrontations about one particular room that had three tables and all of us wanted to claim it. The rest was co-working space. In an office tug of war, we subsequently managed to secure that space for our start-up.

4.5.2. Business support services improvements

Both ZIP and TPZ start-ups mentioned that mentoring programs in their incubators could be improved. T4 reported that they were expecting a more hands-on approach in TPZ, especially in their pre-incubation phase. They believe that a dedicated mentoring program would be beneficial to TPZ start-ups. Regarding the ZIP incubator, Z2 start-up stated that some of the mentors ZIP advertised were not easily accessible. Even though ZIP's mentoring program is hands-on, Z1 reported that some start-ups expected more involvement from their mentors.

4.5.3. Financial support improvements

Both TPZ and ZIP start-ups pointed out that promised financial support had its drawbacks. While ZIP promised financial support for best projects enrolled in their program per generation, it didn't fulfill that promise when the two interviewed ZIP start-ups were enrolled. That caused dissatisfaction in their generations, and their suggestion is a more transparent model of advertising that is more aligned to reality.

TPZ offers financial aid to projects enrolled in the Startup Factory Zagreb program. However, there is a stipulation in the contract all enrolled start-ups have to adhere to, which prohibits them from receiving additional funding. A less restrictive funding program would be more beneficial to young business ventures.

5. Discussion

The objective of this study was to explore differences and similarities of services and support that public and private start-up incubators provide to their users in Zagreb. The two incubators examined in this study fit the Phan et al. (2005) definition of business incubators as "property-based organizations with identifiable administrative centers focused on the mission of business acceleration through knowledge agglomeration and resource sharing" (p. 167). ZIP, the private incubator focused on providing acceleration services since its inception, while TPZ followed suit by launching the Startup Factory Zagreb program in 2016, thus overtaking all competition by introducing an attractive financing option for young business ventures. One could argue that the Startup Factory Zagreb program contributed to recent problems that ZIP encountered, and secured TPZ's dominance in the business incubator industry in Zagreb.

Services that ZIP and TPZ offer to their users are similar in nature, but vary in approach. Both incubators offer basic infrastructure such as office space, meeting rooms, conference rooms, and all the supporting amenities as mentioned by Chan & Lau (2005), Arlotto et al. (2011), Carvalho & Galina (2015), and Deák & Podmetina (2013). Tenants of both incubators commended the overall feel and aesthetics of both venues, as well as the importance of good locations of both incubators. TPZ is providing free office space for a year to all start-ups that are enrolled in the Startup Factory Zagreb program, while other start-ups located in their premises pay subsidized rent that is substantially lower than other commercial options. ZIP offers free office space to all start-ups during the duration of their program.

The difference between the two incubators that is apparent at first glance is scale. While ZIP houses up to eight incubators per generation, TPZ offers an impressive 100 office modules on their premises. Interviewed TPZ start-ups reported that office space provided was extremely

important to them, while ZIP start-ups thought of it as a secondary feature, one which is not used by many of their colleagues. What one of the interviewed ZIP start-ups noted was that they were one of the rare companies using office space to a full extent.

While both incubators feature mentoring programs as part of their business support services, the ZIP mentoring program proved to be far superior and useful for young business ventures. Carvalho & Galina (2015) identified coaching as one of the key elements that "accelerates tenants learning skills and development process" (p. 259). ZIP approaches mentoring and coaching as a vital part of the incubation experience, providing a hands on approach with access to some of the best Croatian entrepreneurs. Start-ups enrolled in their program are provided "best fit" mentors for their specific projects, as well as a dedicated on-site mentor to whom they report on a bi-weekly basis.

ZIP puts great emphasis on progress tracking, setting goals and connecting their tenants with local and international experts in their respected fields. Even though one of the interviewed ZIP start-ups was not completely satisfied with mentoring in ZIP, they noted that their dissatisfaction was a matter of fit, not a matter of quality. TPZ, on the other hand, does offer access to mentors (both partner mentors and staff on-site) to their tenants; however, they do not offer dedicated mentoring, nor progress tracking or goal setting. TPZ's approach to mentoring could be described as advanced networking. Experiences with mentors, as described by interviewed TPZ start-ups, vary from scarce, up to seldom contact when specific help was needed. While TPZ startups all reported that the accessibility of TPZ mentors was satisfactory, they were expecting a more hands on approach. It has to be taken into account that ZIP takes in a limited number of tenants per generation, while TPZ is currently housing 90 companies.

Both incubators organize and host workshops and lectures held by mentors and guest speakers, covering diverse topics on general questions (how to start a company, marketing, how to get subsidies, etc.), as well as topics related to specific areas (IT, application development, design, user experience, etc.). Education within both incubators was described as a good experience, especially because it offers additional networking opportunities for start-ups.

Networking is one of the aspects of the incubation experience all start-ups valued greatly, as it gave them access to people within their specific industries that are not easily accessible. Networking events held on both incubator's grounds, networking with mentors, outside partners, and other start-ups was an enriching experience for all Zagreb start-ups.

This study has identified one interesting discrepancy between Zagreb start-ups and their international peers. All interviewed start-ups reported the importance of networking with other start-ups. Pettersen et al. (2016) and Chan and Lau (2005) found that start-ups were generally not interested in networking with their peers. Pettersen et al. (2016) noted that while start-ups valued some of the perks of incubator enabled networking, they were generally reluctant to share their business secrets, as well as their own network resources (p.8). Chan and Lau (2005) reached a similar conclusion in their study of Hong Kong start-ups. While tenants of Hong Kong Science Park incubator were mostly satisfied with the infrastructure and some business support services, they were generally not impressed with marketing events, press conferences, and meetups. They also reported that there was little to no interaction in-between start-ups. The study showed that "networking and clustering are ranked the lowest according to the value that would contribute to the business development process" (Chan & Lau, 2005, p. 1226).

Zagreb start-ups reported widely different experiences. Networking and networking events organized by both incubators are mentioned as an extremely important part of the offered

incubation experience. Zagreb start-ups approached networking as a learning experience, as well as an opportunity to expand their professional network and approach potential investors. Networking with other start-ups inside the incubator was described as a wholesome and valuable experience. Zagreb start-ups emphasized the importance of sharing ideas, knowledge and experiences within incubators, which, in some cases, grew into life-long friendships and business partnerships. This discrepancy might be attributed to cultural differences, but it might also be an indicator on how seriously Zagreb start-ups regard their projects. One of the impressions author of the study derived from interviewed companies was that their start-up experience was treated as a test-run for future business interactions on the market.

Access to financial resources was mentioned as important while choosing which incubator to join. Primary motivator for joining incubation programs for the overall majority of interviewed start-ups was financial support (3 TPZ start-ups and 1 ZIP start-up list financial support as their primary motivator). TPZ offers financial support to all start-ups enrolled in their Startup Factory Zagreb pre-acceleration program. This project, started in 2016, greatly boosted the appeal of TPZ among Zagreb start-ups. ZIP nominally offered financial support to best projects within their program but has fallen short on that promise in the past two years, because of inability to secure outside funding. Furthermore, the publically funded TPZ is more appealing for Zagreb start-ups because it offers free office space to projects involved in the Startup Factory Zagreb program and subsidized leases to other members. ZIP asked for 3000HRK entrance fee for joining their incubation program.

Reputation of the incubator and the quality of mentors was also an important deciding factor for all interviewed start-ups. ZIP offered a more impressive mentor line-up on their website than TPZ. However, one interviewed ZIP start-up mentioned that not all mentors were

accessible during their stay at ZIP. TPZ's appeal comes from the partnership with the City of Zagreb. One of the interviewed TPZ startups specifically mentioned that this partnership helped them in approaching potential investors.

When this research began both the public TPZ and the private ZIP incubators were fully operational. In the past few months, ZIP encountered numerous problems, and its future operations are now in question, primarily due to financial difficulties. TPZ recently moved to a new venue that has further increased its appeal. At this moment TPZ is the best and only true option available to Zagreb start-up's that are interested in joining an incubation program.

The purpose of this study was to explore how public and private start-up incubators are providing services and support to their users in Zagreb. Considering that a study of this type has not yet been conducted in this area, insights of this study on the incubation process in Zagreb's private and public incubators helps in better understanding business incubation practices in this region. Interviews with tenants of Zagreb's incubators showed that Zagreb's private and public incubators provide services that are on par with their international counterparts. Results of this study show that Zagreb's start-ups, much like their international peers, expect and value similar material and non-material services business incubators provide. One phenomenon has been noted during this research. Zagreb's start-ups especially value the aspect of networking within start-up incubators, with special emphasis on networking with other start-up's, which is not the case in many studies conducted worldwide.

5.1. Recommendations for Future Research and Practice

This study was focused on uncovering the quality and scope of services offered in one private and one public business incubator in Zagreb. While the topic of motivation to join the incubation process was inevitably addressed, it would be interesting to further examine this

topic. An impression formed by the researcher during the research process was that vast majority of interviewed start-ups approached the incubation period as a “practice run”, rather than as an opportunity to develop their start-up into a serious business venture.

Furthermore, a deeper research on the complexities of start-up culture in Croatia would be beneficial. All interviewed start-ups made a clear distinction that they are not regular young companies. All of them distinctly addressed to themselves as “start-ups”. Examining what constitutes a “start-up” as opposed to a “regular young company” would be beneficial in order to clear up some terminology inconsistencies within the body of literature addressing business incubation.

Further research on the services provided to Zagreb start-ups should incorporate the perspective of the start-up incubators as well. In-depth interviews with managers of the two examined incubators would be beneficial in creating an over encompassing picture of the start-up infrastructure in Zagreb.

This study uncovered that Zagreb start-up’s especially value networking with their peers within the incubator, as opposed to findings of similar studies. An extensive study of networking practices within Croatian business incubators, as well as a wider business community might prove to be quite interesting in that respect.

Findings of this study shed light on how tenants of start-up incubators perceive services and support provided to them, the extent to which they use it and what they value and need most in the incubation process. This information may prove to be beneficial to Zagreb start-up incubators in adjusting their approach to better suit the needs of their tenants. Overall, tenants of both incubators were satisfied with the quality of services and support provided to them, but they also proposed possible improvements. ZIP tenants mentioned the lack of space, while TPZ

tenants noted the lack of a lab traditional workshop that would greatly improve the experience of start-ups that are technically oriented. TPZ start-up also expressed the need for a more hands-on mentoring approach. An impression formed by the researcher is that a dedicated mentoring program would be beneficial for TPZ start-ups. TPZ start-ups proposed a less restrictive funding program than the one currently offered in their incubator, while ZIP start-ups asked for more transparency in ZIP advertising which offered financial support before signing them up, but that promise was never fulfilled.

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Appendix A

E-mail sent to Start-up Representatives

Subject: Pomoć kod istraživanja: Start-up inkubatori u Gradu Zagrebu

Poštovani, moje ime je Jelena Putarek i u sklopu MS programa "Service Leadership and Innovation" na RIT Croatia provodim istraživanje o start-up inkubatorima u Gradu Zagrebu. Svrha istraživanja je stjecanje dubljeg uvida o samom procesu poslovne inkubacije, kao i uslugama koje se mladim poduzetnicima nude u Gradu Zagrebu. Istraživanje je bazirano na nestrukturiranim intervjuima sa predstavnicima poduzeća koja su locirana u inkubatorima/tehnološkim parkovima. Svi prikupljeni odgovori i identitet ispitanika biti će zaštićeni, a rezultati istraživanja će biti dostupni svim sudionicima.

Ovim putem Vas molim za dopuštenje provođenja istraživanja u Tehnološkom parku Zagreb te pomoć u provedbi istoga. Da bi istrazivanje bilo valjano trebaju nam tri voljna sudionika (predstavnika poduzeća lociranih u TPZ-u). Bila bih Vam zahvalna ako biste mi omogućili pristup potencijalnim sudionicima i pružili podršku prilikom dogovaranja suradnje s njima.

Za sva dodatna pitanja i informacije o istraživanju, možete me kontaktirati na ovu e-mail adresu ili broj telefona: 098/971-6330.

Unaprijed zahvaljujem,

Jelena Putarek

Appendix B

Interview Questions for Start-up Representatives

What were your expectations of business incubators prior to joining the incubator?

Which services did you need the most prior to joining?

What was your motivation for joining the incubator program in the first place?

Which services do you use?

Which services do you find most valuable?

Which services could be improved and how?

What is missing?

In your opinion, what was the main benefit of joining?

Since joining, have you found new, unexpected benefits and values that weren't expected prior to joining?

Which services don't you use and why?

Appendix C

List of Themes and Sub-Themes

Theme	**Sub-theme**
General information on start-ups	Stage of venture Prior experience in other incubators
Motivation for joining	Financial support Infrastructure Good location of the incubator Business support services Mentoring Networking Flexibility of the program
Infrastructure	Office space Meeting rooms Conference rooms
Business support services	Mentoring Education Legal services Accounting
Networking	Networking with mentors Networking with other start-ups Networking with potential investors

Other services	Financial resources Internationalization Reputation of the incubator
Overall experience	Positive atmosphere Ecosystems Maturity of the program Fit with the incubator