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Market-Entry Strategies of Startup Owners

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Walden University

College of Management and Technology

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Evgeny Tsaplin

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Walden University
2018

Abstract

Market-Entry Strategies of Startup Owners

by

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MSc, National Research University Higher School of Economics, 2013

BS, Russian Institute of Management, 2011

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Abstract

Russia's startups fail at high rates. The purpose of this multiple case study was to understand the market-entry strategies used by accelerated startup managers to succeed in business longer than the first 3 years. The target population for this study was 3 startup owners who completed an acceleration program from the Internet Initiatives Development Fund and continued to operate businesses that generated revenue. The participants in the study were located in 3 different cities in Russia: Moscow, Saint Petersburg, and Tomsk. The conceptual framework for the study was Raheem and Akhuemonkhan's theory of enterprise development and von Bertalanffy's general system theory. Data collection involved semistructured interviews, review and analysis of company documents, reflective journal entries, and direct observation of the management operations and processes. Data were analyzed using Yin's 5-step data analysis process. A thematic analysis of the data revealed 4 themes: evolution of an entrepreneur, sales strategy, acceleration impact, and recommendations for accelerators and incubators. The results of the study may contribute to startup survivability as well as exchanging successful experience among new entrepreneurs. For those people who plan to start a business, this study may contribute understanding the skills for initiating a startup.

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Section 1: Foundation of the Study

Russia's startups fail at high rates (Veselovsky, Nikonorova, Krasnyukova, Bitkina, & Stepanov, 2017). Evidence on the survival rate of enterprises is of great interest not only for entrepreneurs but also for members of the society in general (Jamil, Ismail, Mahmood, Khan, & Siddique, 2015; Mahmood et al., 2015). As of 2018, there are no data concerning the functioning of startup accelerators in Russia, and this problem is especially significant because business incubation and acceleration performance in different countries varies (Bruneel, Ratinho, Clarysse, & Groen, 2012).

Background of the Problem

The social perception of business failure can significantly affect an entrepreneur's professional identity, social connections, and future employment possibilities (Jenkins, Wiklund, & Brundin, 2014; Mandl, Kuckertz, & Allmendinger, 2015). Stigmatization from the society negatively affects the social activity of an entrepreneur (Mandl et al., 2015; Simmons, Wiklund, & Levie, 2014). The survivability of startups largely influences the attitude of the society toward entrepreneurship (Mandl et al., 2015).

Russian accelerators are lacking information about the efficiency of their programs (Tsaplin & Pozdeeva, 2017). In the case of emerging economies, experienced entrepreneurs often support accelerators with their mentorship and contacts to essential partners in the Silicon Valley (Bliemel, Flores, Hamilius, & Gomes, 2013). According to Fehder (2016), external geographically dependent factors influence the efficiency of an accelerator; the higher the networking capabilities and investment activity in the region, the stronger the benefit is for startups to participate in acceleration programs. Hence,

research on the startup survival rate after undergoing an acceleration program might give new insights into the investment process in Russia.

Problem Statement

Russia's startup companies fail at high rates (Veselovsky et al., 2017), and 70% of startup companies in Russia fail to succeed in business beyond three years (Безрукова, Степанова, Шанин, & Дуракова, 2015). The general business problem is that technology startups in Russia approach new venture formation without an understanding of market entry strategy. The specific business problem is that some accelerated technology startup owners often lack market entry skills to succeed in business beyond three years.

Purpose Statement

This qualitative multiple case study aims to explore the market entry skills that accelerated technology startup owners use to succeed in business beyond three years. The target population is startup owners who completed an acceleration program from the Internet Initiatives Development Fund. This study may contribute to understanding how technology startups can increase sustainability and initiate key processes to create a strongly competitive, high-impact market entry strategy.

Nature of the Study

I compared qualitative, quantitative, and mixed research methods to identify the most suitable for the study. I selected the qualitative research method to explore the innovation ecosystem in Moscow, Russia, to gain a better understanding of the startup market entry strategy. The barriers to obtaining statistical information from nonpublic

firms are an obstacle that limits the researcher to perform a quantitative or mixed method study (Chen, Hope, Li, & Wang, 2011). A researcher may not have a full understanding of the innovation ecosystem and cannot analyze the market entry strategies because they require larger samples (Bannon, 2015; Palinkas et al., 2015). Mixed method designs are used to confirm hypotheses based on an existing conceptual model (Palinkas et al., 2015), which was not the purpose of my study design.

An ethnographic study allows the researcher to gain information about the problem by interacting with the participants (Haines, 2014). The nature of a phenomenological study does not allow the researcher to construct knowledge about a topic and describe and interpret a group of technology startup managers. To achieve my research goals, I collected data through a combination of a semistructured interview, a review of company documents, reflective journal entries, and direct observation of the management operations and processes of technology startup managers. The qualitative study design consists of a qualitative multiple case study for understanding the market entry strategy used by accelerated technology startup managers to succeed in business beyond three years.

Research Question

The overarching research question for this study is “What market entry skills did accelerated technology startup owners use to succeed in business beyond 3 years?”

Conceptual Framework

My review of scholarly articles uncovered that accelerators and incubators both aim to help startups during their initial stage and the major difference is the duration of

the process (Cohen & Hochberg, 2014). Raheem and Akhuemonkhan (2014) had one of the most detailed works conducted in this area and described the activities of business incubators, the acceleration process, and their surrounding ecosystem. Business incubators implement functions such as supporting economic diversification, marketing new technologies, developing entrepreneurship, creating jobs, increasing the overall standard of living, and providing acceleration programs (AL-Mubarak & Busler, 2015). Jamil et al. (2015) argued that business incubators have a tremendous impact on a country's development as a result of creating jobs, opening schools, breeding new leaders, accelerating a startup, and overall boosting the economy. Lai and Lin (2015) outlined how different system indicators of business incubation, such as intellectual property, capital, networking, facilities, and equipment, affect startup growth. The study suggested measuring tools for these system indicators and compared results with real-life indicators.

I selected the systems theory as the conceptual framework of this study. The general systems theory was introduced by Von Bertalanffy (1972) and is used to explain the relationships and patterns between generalized systems and their subclasses. In the case of research, the systems theory can explain how acceleration and incubation influence startups' market entry strategy by explaining the relationships between system components.

Raheem and Akhuemonkhan (2014) examined the key features of business incubator activities as well as their goals, types, differences, success factors, and most importantly, effects on accelerating startups in the view of their successful development.

Another group of researchers, Roseira et al. (2014), examined business incubators from the benefits for the entrepreneurs themselves, the expectations of entrepreneurs when selecting an incubator, and the level of satisfaction resulting from the incubation process. As startups continue to fail at high rates, the purpose of exploring their market entry strategy is to improve the understanding of how acceleration programs influence the skills of newly formed company owners to succeed in business beyond three years.

Operational Definitions

Accelerated startup: An accelerated startup is a newly formed company that is improving its performance by attending an acceleration program and benefiting from business incubator resources, connections, and legitimacy (Lasrado, Sivo, Ford, O’Neal, & Garibay, 2016).

Accelerator: An accelerator is a process of a business incubator or a stand-alone entity that helps startups develop by providing guidance and mentorship (Cohen & Hochberg, 2014).

Business failure: Business failure is a negative result of entrepreneurial activity that leads to loss of profit and business termination (Mueller & Shepherd, 2016).

Technology startup (tech startup): Technology startup is a venture that performs intensive technological activities (Eesley, Li, & Yang, 2016).

Assumptions, Limitations, and Delimitations

The study is specific to accelerated technology startups and participants of the acceleration program by the Internet Initiatives Development Fund. The study explores three startups that continue to operate after three years since their initial formation. I

selected the participants because according to Russian Venture Investment Market, Results of 2014 (2015), the Internet Initiatives Development Fund is the best-performing investment fund in Russia.

Assumptions

An assumption is a realistic expectation of a researcher of what he believes to be true (Marshall & Rossman, 2016). The study included several assumptions to provide insight into the technology startup market entry strategy. I explored technology startups that were for-profit, privately owned, and participated in an acceleration program. The results of the examination of market entry strategy can provide transferability of the research findings intended to guide technology startups (Frimodig & Torkkeli, 2013; Payson & Davidian, 2015). The key condition of this study is that the participating technology startups provide an access to their business processes for research purposes.

The procedure of gathering data through interviews allowed the participants to develop a connection with the researcher to stimulate them and provide feedback that explains their experiences (Bauer, 2016; Gravetter & Forzano, 2015). Because of the nature of the informal interview process, I assumed that the participants were providing honest information that could be used to analyze their experiences. The participants were critical to the study and supplied me with important insights and sources of evidence.

The process of data gathering in ethnography allowed me to receive valuable information about the history and culture of a technology startup (Marcus, Weigelt, Hergert, Gurt, & Gelléri, 2016). I was able to capture insights within the technology startup through a semistructured interview, a review of company documents, reflective

journal entries, and direct observation of the management operations and processes of technology startup managers.

Limitations

The limitation of a study is an impact or an influence on the results of the research (Yin, 2015). A potential weakness can appear in an inability to transfer the research findings to technology startups in other countries. Additionally, the circumstances for technology startups accelerated by the Internet Initiatives Development Fund may differ from other technology parks, accelerators, and business incubators depending upon the industry in which they specialize in.

My work experience in the field of technology entrepreneurship may have caused bias by allowing me to observe the details that less experienced researchers would miss. Collins and Cooper (2014) discovered that the impressions of the researcher might cause a subjective response that can distort observations. The usage of a qualitative research method that highlights the participants' awareness of innovation ecosystem provides a risk that the researcher may have opinionated ideas.

Delimitations

Delimitations are constraints that are arranged by the researcher to narrow the scope of a study (Bryman & Bell, 2015). My population included a small sample of three participants to represent the acceleration program of the Internet Initiatives Development Fund. Thus, I did not account for technology startup companies that are less than three years old. This study is specific to the Russian innovation ecosystem because of the significant number of small technology startups around the world.

Significance of the Study

A substantial evidence confirming that accelerators are promising means for developing the investment environment exists. A thorough analysis of the performance of accelerators can help modify the investment policy (Dempwolf, Auer, & D'ippolito, 2014). Accelerators support the so-called pay-it-forward mentality through the need for successful entrepreneurs to share their experience with beginners (Haines, 2014). Still, despite the presence of numerous local studies regarding acceleration programs, the effectiveness of accelerators is still questionable, and so far, no comprehensive research would confirm that accelerators add value (Rodríguez, 2015). Most accelerators do not even collect any data about their performance (Lall, Bowles, & Baird, 2013). New information about the acceleration process in Russia can help attract more attention to this relatively recent phenomenon.

Contribution to Business Practice

This study intends to help technology startups increase their survivability. It is important to gain vision from the viewpoint of employees and top managers who make strategic decisions to get a better understanding of market entry strategies and of how the acceleration program contributes to those decisions. This study may contribute to business practice by providing information on how the acceleration program initiates key processes to create a strongly competitive, high-impact market entry strategy and increase startup survivability.

Implications for Social Change

Increasing the survival rate of technology startups beyond three years can have an impact on the socioeconomic situation of areas of operation (Kane, 2010). Businesses must develop their primary activities to operate successfully: implement social programs and invest in local community growth (Raheem & Akhuemonkhan, 2014). Throughout their life cycle, companies invest in entrepreneurship and the accompanying infrastructure, create new job opportunities, pay taxes, and improve the quality of life (Gummesson, 2014). By supporting socially significant initiatives, technology startups participate in resolving socioeconomic and environmental issues, thus promoting an environment favorable for business and social development to strengthen the surrounding community (Cholette, Kleinrichert, Roeder, & Sugiyama, 2014).

A Review of the Professional and Academic Literature

The research problem for this qualitative multiple case study is to explore the market entry strategy that accelerated technology startup owners use to succeed in business beyond three years. Incubators and accelerators are the principal agents of developing entrepreneurship in the whole country since the emergence of the first business incubator in Batavia, New York, in 1959 (Mentink, 2014; Raheem & Akhuemonkhan, 2014). The incensement of startup survival may cause an impact on the community of areas of operation (Kane, 2010). The appearance of business incubators is strictly dependent on the needs of growing small and young companies (Цаплин, Волкова, & Савенков, 2016). Managers and shareholders of businesses vary the definition of a success term (Dias & Teixeira, 2014). In this study, “sustainability” is the

appropriate word to describe the success of a technology startup owner to operate beyond three years.

In this research, I combined the concept and terminology of acceleration and incubation since both aim to help startups during their initial stage, and the major difference is the duration of the process (Cohen & Hochberg, 2014). I focused on accelerated technology startup owners who successfully operated for over three years. My review of scholarly articles uncovered the way in which accelerators and incubators supported startups during their initial stage. Raheem and Akhuemonkhan (2014) had one of the most detailed works conducted in this area and described the activities of business incubators, the acceleration process, and their surrounding ecosystem, making the finding most preferred for a conceptual framework. My literature review explains such functions and detects the key elements of the working of such agents of economic activity. I compiled the literature review in sections to guide the reader from general to specific aspects of business incubation and the acceleration process with an outline of social change and described in detail the activities of business incubators and the way the acceleration process may add value to a startup.

Startup Acceleration

Understanding the difference between accelerators and other accelerator-like organizations is significant when a startup founder searches for the best opportunity to support his entity (Dempwolf et al., 2014). Entrepreneurs should consider certain factors to evaluate their future success when choosing the supporting organization. Accelerators usually have short-term programs aimed mostly at early-stage firms (Holstein, 2015). The

duration of a program places limitations for ventures willing to participate in such programs (Isabelle, 2013).

Acceleration is a new generation incubation model that implements specific features: focus on profit, selection process, services provided, cohort-based structure (Dempwolf et al., 2014). Malek, Maine, and McCarthy (2014) also emphasized that the number of participants is usually much greater in accelerators than in incubators.

Accelerators themselves are not that homogeneous. One can categorize accelerators into several groups depending on their founders' main objective: innovation, university, corporate, and social accelerators (Dempwolf et al., 2014). The authors expanded the definition of innovation accelerators given by Cohen and Hochberg (2014), focusing on the specific business model of these organizations. The definition identified innovative accelerators as business entities that make seed-stage investments in promising startups in exchange for equity as part of a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event or demo day (Dempwolf et al., 2014). It is important that the main objective of an innovative accelerator is profit and the managers try to generate the most relevant value proposition for their clients (startups) by facilitating easy access to modern technologies in a narrow field. Their private orientation is the difference between innovation accelerators and other types of accelerators (Dempwolf et al., 2014). Bliemel et al. (2013) agreed with the definition mentioned above but added that, based on the results of empirical research, there are cases when the organizations that called themselves accelerators did not possess all the features.

Pauwels, Clarysse, Wright, and Van Hove (2016) did not emphasize the for-profit position of an accelerator as its distinctive feature but mentioned five other features, including program package, strategic focus, selection process, funding structure, and alumni relations. Then they divided accelerators into three groups, depending on the purpose of their stakeholders: the so-called deal-flow makers, ecosystem builders, and welfare stimulators. Such differentiation seems to be in line with the groups marked by Dempwolf et al. (2014).

Comparing accelerators with business incubators and angel investors, Cohen (2013) found more similarities with the latter. In contrast to angel investing, the selection system in accelerators lets investors spread their risks, and besides, a mutual accommodation and a limited time frame in accelerators make for improving efficiency and the influence of mentors on firms (Cohen, 2013). From the side of accelerator managers, the business model is different: incubators work for cost recovery, while accelerators profit from their equity stakes (Bliemel et al., 2013). Furthermore, the process of interaction with mentors is less intense in incubators, and consultations with professionals are often available for a fee only. For angel investors and accelerators, it is common that these are programs with equity investments aiming for quick exits (Bliemel et al., 2013).

Impact of Accelerators on New Ventures

Despite the presence of numerous local studies regarding acceleration programs, the effectiveness of accelerators is still questionable, and so far, no comprehensive research would confirm that accelerators add value (Marimuthu & Lakha, 2015;

Rodríguez, 2015). Most accelerators do not even collect any data about their performance (Lall et al., 2013; Tsaplin & Pozdeeva, 2017). According to Fehder (2016), in metropolitan statistical areas with accelerators in their ecosystems, the number of seed- and early-stage venture capital deals increased by 104%, the total amount of seed- and early-stage ventures provided in the region grew by 289%, and the number of individual investors rose by 97%. Moreover, accelerators increased the chances of startups for seed investment in Indian startups (Sharma, Joshi, & Shukla, 2014). It is also noted that startups that have passed through an acceleration program have a high chance of being acquired (Sharma et al., 2014). In India, where acceleration programs are at their early stage, according to the interview results of the managers of accelerators and startups, the mortality rate among startups has decreased after such programs have started to work (Sharma et al., 2014). In accelerators aimed at social business, an indicator of success is not only the subsequent financial stability of the startup but also the ability of the accelerator to identify and improve the idea of the social entrepreneur and problem-solving (Levinsohn, 2014). To make an accurate measurement of the acceleration program performance, one must consider a large number of factors.

Networking facilities are one of the most efficient services provided by accelerators, both internal interaction or contacts with experts. Gonzalez-Uribe and Leatherbee (2016) evaluated the work of an accelerator based in Chile and found four factors affecting the success of accelerated startups. First, social clout, which the young entrepreneurs mainly receive during the pitch day or the demo day. Second, a so-called peer effect where a business gets to know how to play a significant role in the

entrepreneurial ecosystem. Third, the startups tend to improve their self-efficacy during the acceleration, which, in turn, supports new venture performance. Fourth, structured accountability, thanks to the regular meetings, are also found to be meaningful for young enterprises.

According to Yu (2016), the main contribution of acceleration to young firms is the feedback effect. Participating in the acceleration process helps entrepreneurs understand whether their idea is viable and, consequently, close faster. If a startup shuts down early, it is graded as an acceptable result. Such acceptance allows startup managers to restart their work with a more sustainable business idea. This observation is also confirmed based on the experience of accelerators in Pittsburgh (Holstein, 2015).

Haines (2014) emphasized the usefulness of accelerators for the entire innovation ecosystem; they create a reliable base of promising projects for venture capitalists. They also support the so-called pay-it-forward mentality through the need for successful entrepreneurs to share their experience with beginners (Haines, 2014). This is especially the case for emerging economies; for instance, experienced entrepreneurs often support accelerators in Australia with their mentorship and contacts to important partners in the Silicon Valley (Bliemel et al., 2013). Accelerators help create an open environment where entrepreneurs, mentors, and tech specialists codevelop proper ideas (e.g., during the demo day), which is consistent with the open innovation theory (Battistella, De Toni, & Pessot, 2017).

In turn, the efficiency of the accelerator is influenced by external factors, namely, the regional context. Fehder (2016) concluded the higher the networking capabilities and

investment activity in the region, the stronger is the benefit for startups to participate in acceleration programs in the region. Researchers on accelerators in Finland have shown that the success factors of such programs include the quality of the knowledge the accelerator mentors possess, their ability to transfer this knowledge into valuable information, and also the ownership of the accelerator (Frimodig & Torkkeli, 2013). On the other side, accelerators limit their effectiveness in the cases where their startups need a mass customization of the product (Battistella et al., 2017). Moreover, accelerators aim for the quick development of high-growth firms; this quickness is caused by the short-term orientation of accelerators (Isabelle, 2013). Accelerators can be less effective for firms in other investment stages (Isabelle, 2013).

Business Incubator Impact on Startups

Business incubators provide young companies with different facilities and services that help to grow businesses (Bruneel, Ratinho, Clarysse, & Groen, 2012; Jørgensen, 2014). While assisting in developing enterprises, business incubators usually take the mentoring role and affect various aspects of startup activities (Raheem & Akhuemonkhan, 2014). According to statistics, an incubated business becomes more profitable and grows rapidly, producing the social impact on the industry, the community, and the city where the business is operating (Raheem & Akhuemonkhan, 2014).

Incubation has an immense value to the community. AL-Mubarak and Busler (2014) discussed the main aspects of the analysis of business incubators. First, the work of business incubator involves close cooperation with the local community. While starting up an incubator, entrepreneurs should conduct a detailed study on the feasibility

of such type of organization in the area and the demand for the business incubator services. Second, business incubators should focus on the needs of the tenants and adapt to their requirements in the particular field. Third, the impact of business incubators on the local community could manifest in the diversification of technology, economic and social development, creation of new jobs, rise in tax payments, educational system development (for example, in universities), and improvement of the overall quality of life (AL-Mubarakhi & Busler, 2014).

Cantù (2015) divided the special social mission of incubators into two categories: the positive impact of external and internal networks on the incubated businesses. The internal help is the base for building partnerships between the incubator and the tenants, while the external one is mostly about building the necessary relationships between the tenants and the local community, which is of great importance for both actors of the partnership (Cantù, 2015). Moreover, Cantù's assertions are similar to the statements of AL-Mubarakhi and Busler (2015), which pay attention to the benefits of the collaboration of incubated businesses and the local community, which includes local firms, universities, and other science development centers.

According to the research of Roseira et al. (2014), the main social impact of incubated businesses consists mostly of the networks that emerge as a result of the incubation process. In contrast to the other authors, Bakkali, Messeghem, and Sammut (2014) supposed that the main positive social impact of incubated businesses is the increase in the number of jobs and the development of human resource practices for the different types of professionals and firms, specifically, in the missionary structures, the

impact on the social part of a human being like beliefs, ideologies, expectations, and other aspects that do not influence the value of creating a process but affect the worldview of the participants of the local community (Bakkali et al., 2014).

In conclusion, it is necessary to mention that it is impossible to underestimate the importance of the role that incubated businesses play in the local community. The social impact of such enterprises is high, ranging from the economic development and job creation to the rise in the tax payment amount and building the particular ideology. That is why business incubators play a key role in creating and promoting effective business systems (Bakkali et al., 2014).

University-Affiliated Business Incubators

University-affiliated business incubators connect the technological ideas of a country or a region with the necessary business services (Dahms & Kingkaew, 2016; Lasrado et al., 2016). The reviewed papers are all building upon the comparative and case studies of successful university business incubators both in developed and in developing countries, enabling to assert that this type of business incubators is not only popular but also rather effective. University business incubators provide innovative ideas on the one hand and commercialize these ideas on the other hand (Chandra & Chao, 2016; Mian, 1997).

Comparing university and non-university business incubators showed a greater performance of the first ones. According to Lasrado et al. (2016), the sales and job growth of firms incubated at university business incubators was significantly higher. Chandra and Chao (2016) confirmed the differences between the services provided in two

types of incubators. The authors also found that university business incubators usually used a broader range of funding sources, with the willingness and ability to direct financial support being restricted, in comparison with the non-university business incubators.

What exactly allows university business incubators to perform better remains unclear. Using an in-depth, multi-level approach to the case of the Karolinska University business incubator, Baraldi and Havenvid (2016) concluded that business incubator managers should abstain from simple internal operations and take a long-term view concerning six incubator drivers formulated by the authors. These drivers are as follows: positioning in the value chain, risk-taking, revenue model, governance and control, internationalization, and cooperation and competition. The specific set of services provided can also be a reason for the higher performance of university business incubators.

Entrepreneurs are essential to the success of a university business incubator. Dahms and Kingkaew (2016) surveyed entrepreneurs as clients of university incubators in Thailand and the United Arab Emirates. McAdam, Miller, and McAdam (2016) expanded the triple helix model by adding the fourth actor – stakeholders, meaning end users. The three authors also highlighted the importance of using a region-based method to determine an incubator's strategy instead of blindly applying best practices. The demand-side perspective and respect for the country or regional context are new and promising approaches managers can build on in incubation process management.

The literature review revealed the most discussed topics in this field. The advantages of an affiliation with a university are of the highest importance for an incubator. Then, the country and regional context play a significant role in an incubator's development. Authors also tend to assess the incubator's work from other perspectives, such as that of entrepreneurs or major stakeholders. Many grey areas remain in the field and leave space for future research.

High-Tech Business Incubators

I considered the latest articles that examine which technology business incubators led young entrepreneurs to success, which indicated that technology business incubation can foster the innovative process by creating a suitable environment for the development of new technological ideas (Raheem & Akhuemonkhan, 2014; ЦАПЛИН et al., 2016). An analysis of research in the field made it clear that collaboration provided by incubators enabled information to become knowledge (Jamil et al., 2015; Patton, 2014). Technology business incubators are an important means of creating innovation policy, as they create a context which makes the results of scientific thought available and applicable (Jamil et al., 2015; Raheem & Akhuemonkhan, 2014)

Insufficient knowledge appears to be a major stumbling block for innovative ventures in the early stages (Patton, 2014). Incubators facilitate the knowledge transfer process necessary to grow a new idea (Frimodig & Torkkeli, 2013; Mansano & Pereira, 2016). The so-called absorptive capacity (the capacity to apply knowledge acquired) of a firm is one of the qualities incubators promote (Patton, 2014). Knowledge, in this context, was understood to mean the experience the incubator team had gained in the

field while working with previous incubatees. One of the former incubatees of a successful incubator considered by Grifantini (2015) also admitted that the incubator provided access to an extensive network of experts in the field of technology. Therefore, the interaction of technology firms and incubators is value-added since incubators can transform basic research into real developments for companies and society (Mansano & Pereira, 2016).

A co-creation approach, rather than a unilateral one, is needed to manage an incubator (Eriksson, Vilhunen, & Voutilainen, 2014; Patton, 2014). Incubators are expected to ensure the competence and relevance of the expert team they provide (Patton, 2014). Conversely, they need to make firms participate in the promotion by demonstrating the incubator team's confidence in the subject (Patton, 2014). As follows from the Collective Commercialization of Ideas Model by Eriksson et al. (2014), the firm's clients, who are the final consumers of the product, are also seen as an incubator party. The importance of the firms' involvement reveals new challenges for incubatees: a firm tenant not only has to invest money but also has to make significant efforts to benefit from incubation (Patton, 2014). Incubation is a collaborative effort, and even the final clients should take part in it (Eriksson et al., 2014).

Varying forms of organization, funding types, and policy objectives are the main parameters that define the context (S. Mian, Lamine, & Fayolle, 2016). It is the context that consequently contributes to the knowledge transfer process (Patton, 2014). Mian et al. (2016) suggested that the co-creation approach should correspond to the number of meetings and the number of team members involved. Notably, little attention is paid to

the technical nature of the subject. The issues that arise in the process of technology incubation are expected to be specific to them, and not applicable to incubators in other spheres. Nevertheless, this study proves the relevance of the proposed contingency model.

the evidence from the papers reviewed provides advice for incubator leaders. The proposed goals for technology business incubator managers include the following: (a) facilitating the knowledge transfer process, (b) paying attention to collaboration, and (c) bearing in mind the context in which the incubator exists. Using these conclusions, a relatively clear strategy for incubators to develop more productively can be formed.

Business Incubator Strategies in Developing Economies

The process of business incubation differs significantly from country to country and corresponds to the startup ecosystem development level of the area (Acs, Estrin, Mickiewicz, & Szerb, 2017; Tsaplin & Pozdeeva, 2017). All developed countries have business incubators functioning in their economies for the integration of innovations in many spheres and the commercialization of technologies, while developing economies are just starting to integrate the business incubation system into the innovation building process (Bruneel et al., 2012). The following section of the literature review is dedicated to identifying the key aspects of the way business incubators function in developing economies.

Dubihlela and Schaikwyk (2014) studied the activity of business incubators in South Africa. According to the results of their study, the incubation process was of great importance to the development of national ventures due to the lack of facilities, money

for growth, and properly trained personnel. Moreover, the economic situation in the region was difficult for growing companies, which is why many young businesses failed at the very beginning of the process of producing goods and services. One of the most significant functions of business incubators in South Africa was to provide all the necessary help for local businesses to move from unprofitability to a competitive level on the world market (Dubihlela & Schaikwyk, 2014).

Jamil et al. (2015) also argued that incubation was the key to growing businesses in a country, focusing on the urgent need to create business incubators in Pakistan. Jamil et al. (2015) found that creating business incubators and gaining the support of young Pakistani companies had a powerful impact on the economic growth of the whole country. Like the South African economy, Pakistan suffers from its own problems that affect the innovation and development process. This is why business incubators are vitally necessary for the country (Mahmood et al., 2015). For example, incubators impacted the job creation process and the emerging interaction between universities and young firms, as well as helping young people to grow in business and as leaders, all of which are necessary for economic recovery. As mentioned by Jamil et al. (2015) and Mahmood et al. (2015) both Pakistani and South African incubators provided their tenants with essentially the same facilities and services as American and European incubators.

In contrast to previous articles, Khalid, Gilbert, and Huq (2014) focused their attention on business incubators in Malaysia, one of the most developed economies of Southeast Asia. The creation of incubators in the region began at the end of the last

century, which is why Malaysian entrepreneurs already had the essential experience in this innovative process. In total, the country had 72 functioning business incubators at the time of the study, which continuously produced new businesses in the local community and the world economy. The authors mentioned that due to high competition among global business incubators, the Malaysian parts of the entrepreneurial process needed constant development (Khalid et al., 2014).

The authors used a range of common methods to examine the effectiveness of business incubators in developing economies. Papers addressing the business incubation process in emerging markets are all case-studies. For instance, researchers considered a comparative study of business incubators in China and India, two papers dedicated to Arab countries, and articles about Malaysia and Turkey. Each described problems appearing in a particular country or group of countries. The results were thus rather specific and contained few basic conclusions concerning developing countries in general. Given this fact, the approaches used by the authors to assess incubators' work can be a valuable tool for future research.

Although incubators' success in the papers reviewed was sometimes evaluated similarly, no universal method of evaluation was found. As for similarities, Elmansori (2014) employed the integrative framework earlier proposed by Mian (1997). The authors interpreted Mian's three types of variables differently, but the main content remains the same in the two articles. In particular, incubator goals and target markets, services provided, funding models, the selection process, and performance outcomes were included. Other researchers assessed incubators' work with the help of original models,

which were, in turn, based on the literature they reviewed as a whole and not on one author's particular model. For instance, Khalid et al. (2014) paid attention to other measures of resource allocation and professional management services, and used a mixed-method approach consisting of a quantitative survey and semistructured qualitative interview. The factors proposed by Al-Mubarak and Busler (2015) for evaluating incubators are: incubators' goals, year of foundation, services offered, number of client firms and number of graduate firms. The year of foundation is a new factor in this method, not found in other evaluation models. It is important to note that there is no universally agreed standard for evaluating a productive and successful incubator's performance.

Incubator performance evaluation is intimately related to determining the incubator's development phase. The four stages model is appropriate for both developed and developing countries (Khalid et al., 2014). Thus, some American incubators are in the last stage because they provide services for ventures from across the world (Khalid et al., 2014). Most Malaysian incubators, meanwhile, are in the first and second stages. The model enables the comparison of incubators in emerging markets with those from developed countries. It remains unclear whether incubators in developing countries differ significantly from business incubators in developed countries.

The review of the extant literature revealed significant gaps concerning the nature of business incubation in developing countries. First, there was no universal set of variables for evaluation of incubation performance in general. Moreover, there was no answer to the question of whether business incubation and innovation processes in

developing countries should have some unique features compared with those processes in developed countries. Future researchers may define development stages of incubators in emerging economies, and these results may contribute to the development of new innovative policies and management methods in those countries.

Incubation and Acceleration in Russia

The history of business incubation in Russia is over three centuries long. Латов and Латова (2015) compared the project with the innovation clusters that existed in Russia in the 18th century mining industry and in the 20th century in the form of *naukograd*, meaning science cities, after World War II. Nowadays, the Internet Initiatives Development Fund is one of the best performing investment funds and incubation platforms in Russia (Russian Venture Investment Market, Results of 2014, 2015). The primary objective of the Internet Initiatives Development Fund is to support small and medium-sized enterprises (Халявская, 2016). The fund's activities aimed at supporting startups include three stages: a pre-accelerator, a distance acceleration course, and face-to-face classes. The participants are expected to learn how to draw an investor's attention to their projects (Халявская, 2016). The fund also provides support to the entrepreneurs after they complete the acceleration process. The Internet Initiatives Development Fund is part of a startup ecosystem which, coupled with the development of the Internet, has contributed to the growth of innovation economics in Russia (Халявская, 2016).

Another area the Internet Initiatives Development Fund focuses on is support of crowdfunding in Russia (Тесленко & Вахромеев, 2014). In Russia, relatively small startups often attract financial support using crowdfunding platforms (ЦАПЛИН &

Волкова, 2016). Also, Russia lacks the legal tools required to fully enable that method (Тесленко & Вахромеев, 2014). The fund, in cooperation with the Russian School of Private Law, is currently working to create such tools (Тесленко & Вахромеев, 2014).

Along with the Internet Initiative Development Fund, the Skolkovo Innovation Center represents another investment platform that promotes economic modernization (Маслов, Ключенкова, & Удалов, 2014; Шестакович & Зулькарнай, 2014). The Skolkovo Innovation Center appeared to take a step forward in combining industry with science and education (Payson & Davidian, 2015). Still, as is typical for Russia, weak demand for innovation impedes progress within the center (Heller, 2015; Латов & Латова, 2015). The Skolkovo Innovation Center alone cannot develop an innovative environment in Russia, but a robust and innovative environment could enable the project to move in the proper direction (Payson & Davidian, 2015; Латов & Латова, 2015). Шестакович and Зулькарнай (2014) also faced a lack of demand for innovation. Both Шестакович and Зулькарнай (2014) and Горобец (2014) maintained that Russian practitioners must consider the previous experience of developed countries in creating innovative clusters to improve working processes in the Skolkovo Innovation Center.

Special economic zones are another ordinary means to advance innovation economics in Russia (Вранович, 2015). Researchers have interpreted the mission of special economic zones in various ways. Неучева and Сабирова (2015) emphasized the fact that special economic zones Lipetsk and Alabuga ranked high in respected international ratings in 2014. Абакарова (2015) asserted that the special economic zone's role is significant because it helps to open the regional and national economy to foreign

entrepreneurs and investors. Колиева and Баликоева (2014) distinguished between free and special economic zones, the former being aimed at drawing foreign investors, the latter at increasing the investment appeal of the region in general. Experience in the area has also shown that these zones can serve to reduce unemployment and promote growth of the gross regional product (Попова & Рубцов, 2014).

Business Incubators' Funding Sources in Developing Countries

Previous studies have proposed various policies aimed at the development of incubation systems. I considered studies examining how business incubators raised money and other support in Chile, China, the USA, South Africa, and Brazil. An analysis of prior research related to the topic, including but not limited to papers by Chandra and Medrano Silva (2012), Chandra and Chao (2009), and Buys and Mbewana (2007), showed differences in funding practices around the world. The experience of different countries described in these papers revealed a range of means for the government to support incubators.

It is essential for new ventures in the early stages to have access to risk capital (Chandra & Silva, 2012). According to institutional theory, Chandra and Silva (2012) concluded that the government's role in supporting business incubators includes, among other things, creating a solid institutional base for an available risk capital market (Chandra & Silva, 2012). Improving bureaucratic processes to reach stronger coordination was also recommended, given the issues found in Chile and Brazil (Chandra & Chao, 2016; Chandra & Silva, 2012). Still, government leaders should not limit support of young enterprise to the creation of the capital market alone.

In addition to an accessible capital market, so-called intangible support is also an essential condition for innovative development (Chandra & Silva, 2012). The surveys conducted both in Chile and Brazil noted the lack of intangible support. Intangible support implies providing solutions to reduce the constraints that appear at the start of a new enterprise, such as improving the application process in Brazil, encouraging new entrepreneurial ideas and establishing related courses at universities in Chile, or providing tax credits for business incubator investors in the USA (Chandra & Chao, 2016; Chandra & Silva, 2012). According to the results of the Godisa case study, an integral part of a business incubator friendly environment is the access to expertise and research facilities (Buys & Mbewana, 2007). Government leaders should not underestimate the significance of such indirect measures, since they ultimately contribute to the entrepreneurial climate.

A business incubator serves as a networking point for investors, incubatees, and skilled practitioners, since it enables the interaction between these agents (Chandra & Silva, 2012). Meanwhile, the environment affects the networking process (Buys & Mbewana, 2007). Etzkowitz and Leydesdorff provided the Triple Helix Model, which emphasized the importance of universities, industry, and government working together to develop a better innovative environment (Marques, Caraça, & Diz, 2006). In support of this model, universities played a leading role in supporting business incubators in Brazil, and governmental institutions worked synergistically with the educational ones and incubator associations (Chandra & Fealey, 2009). Hence, strengthening contact and collaboration between academics, government, and industry may be a helpful means of

creating an innovative environment. The papers reviewed agreed that the most important actions that can shape proper entrepreneurial conditions are: (a) raising capital accessibility, (b) using intangible support, and (c) boosting the networking process.

Predicting Business Failure

Business failure prediction may be necessary for several reasons. First, various prediction mechanisms are often used by financial institutions to assess the risks when lending money to a new enterprise (El Kalak & Hudson, 2016). Second, it is entrepreneurs themselves who most need any information about their businesses' probability of future success (Wang, Gopal, Shankar, & Pancras, 2015). These two main groups apply particular methods to precipitate the growth or decline of a firm.

Financial data can be valuable information showing the probability of business failure. Scherger, Vigier, and Glòria Barberà-Mariné (2014) tried to identify the causes of future business failures using the fuzzy logic method. This approach has advantages over the others since it more widely assesses the qualitative aspects, formalizes the opinions of experts, and the results of such research remain relevant over time. The sector analysis of these cases showed that financial indicators were most significant: the remuneration of shareholders, the frequency of contributions, budget control, financial planning and the search for funding (Scherger et al., 2014). In the group of business processes, the most important reasons for failure included, but were not limited to, the incidence of the use of objects, macroeconomic changes, shifts in the regional economy, productivity, and excess capacity. Several causes had even less impact, such as the market reach, advertising and promotion, lack of planning, and external advice (Scherger et al., 2014).

Further researchers have shown that financial information about a firm's tax activities can also help lenders assess whether the company is worth crediting or not (Zhao, Yeung, Huang, & Song, 2015). Rauch and Rijdsdijk (2013) distinguished between two types of firm closures: closure as a result of poor financial performance and the closure for other, non-financial reasons; the authors did not consider the latter case a business failure. This approach differed from other similar studies, and this, according to the author, increased the accuracy of the study (Rauch & Rijdsdijk, 2013). Still, the importance of economic causes is evident given the emphasis the authors placed on this area.

One factor expected to affect the future success of a new business was its size (Dias & Teixeira, 2014; El Kalak & Hudson, 2016). Thus, micro-, small- and medium-sized businesses need a different credit risk model (El Kalak & Hudson, 2016), since managers in small and micro-sized firms cannot use the kind of financial data previously described for their forecasts (Wang et al., 2015). Hence, young firm owners are interested in anticipation methods that would provide them with knowledge of effective managerial solutions.

Managerial decisions are often considered one of the leading causes of failure (Atsan, 2016; Bauer, 2016). Amankwah-Amoah (2015) found that business decline was related to such decision-maker attributes as human capital obsolescence, power-hoarding, lack of a leader, lack of foresight, and readiness to acquire legitimacy. Rauch and Rijdsdijk (2013), relying on the theory of human capital, found that the probability of failure was related to human capital, in particular – the more developed the general and special

human capital, the lower the likelihood of failure. Moreover, Rauch and Rijsdijk (2013) proposed that the growth of the firm was a significant force affecting the level of development of human capital. In other words, the more intensive the prior development of the firm, the lower the probability of failure, because human capital development is mainly possible through growth (Rauch & Rijsdijk, 2013).

Nikolić, Dharmo, Schulte, and Mihajlović (2015) conducted a study of business leaders who had experienced giving up a business in the past and revealed connections between the firm leader's attitudes and his or her subsequent probability of success. Entrepreneurs attaching importance to external factors such as political, economic, and social issues enjoyed a quick recovery from bankruptcy. Meanwhile, those who relied on technological and environmental externalities were much slower to recover (Nikolić et al., 2015). Holt (2013) made an attempt to systematize the causes of business failures, based on a review of the literature on the topic in general and, in particular, in the construction business. Holt (2013) introduced the concept of causal agents and divided generic failure agents into managerial, financial, company-specific and macroeconomic failures. He assigned several sub-causal agents to each of the general agents. In the literature on business failure, the most often mentioned were managerial agents.

When constructing a strategy for reducing failure possibility, startup entrepreneurs should pay more attention to innovative development. Holt (2013) examined the impact of organizational innovation on the prevention of failure and found that disruptive, incremental and system innovations can prevent the negative influence of causal agents and, in turn, prevent a failure. Disruptive innovation in product

management, for example, can help avoid problems concerning reduced demand, high competition, and price pressure (Holt, 2013).

Particularly, Wang et al. (2015) discussed the possibility of predicting a failure according to check-in data obtained from the mobile application Foursquare. A correlation was found between the check-in history of a place and its probability of bankruptcy, and also between the check-in history of nearby restaurants and the bankruptcy of the restaurant in question. The correlation was particularly strong for low-ranking restaurants (Wang et al., 2015). Hence, executives should pay more attention to innovation processes within the company to avoid business failure.

Recovering and Learning from Business Failure

The fact that business failure is not always a bad thing, but a point to learn from, has already become common knowledge. Based on Schumpeter's entrepreneurial theory, Weber (2014) treated business failure as a result of competition, with such failures demonstrating business intensity and entrepreneurial experimentation level. Amankwah-Amoah, Boso, and Antwi-Agyei (2016) concluded with the fact that business failure can have both positive and adverse effects on the following businesses because while experiencing business decline curtails entrepreneurial activity, it also accelerates the learning process. The fact that entrepreneurs can learn a lot of meaningful lessons from a business failure is commonplace in the literature (Atsan, 2016).

The factors contributing to the learning process can be both external and internal. The study conducted by Bauer (2016) indicated that cognitive learning skills and situation-related factors impact the process of learning from business failure. Mueller and

Shepherd (2016) claimed that opportunity prototypes, professional knowledge, and cognitive style determine the possibility of learning from business failure. Still, Bauer (2016) revealed that when creating a new company, entrepreneurs with prior bankruptcy experience employ only slightly modified business models compared to those used previously.

Not only an entrepreneur's cognitive skills, but also external factors, namely the extent to which the community stigmatizes the business failure, affect the process of the re-entry (Bauer, 2016). Simmons et al. (2014) found that the probability of starting a new venture is highly correlated with the attitudes of other social agents towards bankruptcy and with the way these agents deal with the information. The higher the level of stigma in society after a failure, the less possible it is for a prior "loser" to return to the business world. Moreover, entrepreneurs perceive stigmatization even before the failure occurs. This was shown by the study of failed entrepreneurs on three stages: anticipating the failure, trusting with it, and learning from failure. In the early stages, stigmatization did not help prevent business failure, since entrepreneurs were trying to avoid stigma instead of taking a decision that would be useful for the company (Singh, Corner, & Pavlovich, 2013). The stigma phenomenon can mitigate the ability to overcome a business failure.

Whether failed entrepreneurs start a new enterprise can show how much they have learned from their negative experiences. Jenkins et al. (2014) investigated 120 companies that suffered from a failure and asked what determined the emotional perception of an entrepreneur who has failed, for example how the person perceives a loss of self-esteem. They asked specifically whether the negative experience of the previous failure mitigated

negative emotion in following failures; whether the negative experience was lower when the entrepreneur had another job or another business in addition to the one that failed. Indeed, being a hybrid or a portfolio entrepreneur reduced negative feelings about the loss of self-esteem. The prior failure experience of the entrepreneur also reduced negative emotions and loss of self-esteem during the subsequent business failure (Jenkins et al., 2014)

Involvement in other social activities increased the chances of a positive perception of the experience of failure. The decline of a company is especially hard for those who have no other place of work or no other business (Mandl et al., 2016). Because their definitions of business failure were different, novice, serial, and portfolio entrepreneurs began a new venture after failure under different circumstances. For serial entrepreneurs, the most important reason to leave the business world was the internal responsibility for the bankruptcy, as well as the presence of the possibility of avoiding it. Beginners paid more attention to the permanence of the failure event (Mandl et al., 2016).

Since business failures are considered a good thing, their presence may be a condition for future success, and indeed many authors have tried to find out whether this is true (Atsan, 2016). Byrne and Shepherd (2015) examined entrepreneurs who had passed through a business failure, focusing on the emotional processing of the business failure by entrepreneurs. Byrne and Shepherd (2015) considered several cases confidentially using interviews to see whether the entrepreneurs experienced positive or negative emotions, and which of these reactions increased the ability to make sense of the crisis and to draw meaningful conclusions. The results showed that neither solely positive

nor solely negative perceived emotions made the learning process most effective. The learning process was the greatest with a combination of high negative emotions followed by high positive emotions (Byrne & Shepherd, 2015). Yamakawa, Peng, and Deeds (2015) explored the experience of entrepreneurs who survived a crisis and their ability to learn from their mistakes by studying the example of entrepreneurs re-entering the business world after a prior closure. If the entrepreneur considered the causes of the failure to be internal, that is, attributed the blame for it to himself, it ensured the active growth of his new business. At the same time, Yamakawa et al. (2015) found that entrepreneurs with higher internal blame attribution after more failures received less growth in their future companies than those who experienced fewer failures. Also, the motivation to create a new business increased when the entrepreneur admitted his responsibility for the failure. Thus, previous failures contributed to entrepreneurial learning (Bui, 2016).

Singh et al. (2013) uncovered new beneficial effects of business failures. Failure was not only a motivation for opening a new business, as it was often considered in the previous literature, but also a willingness to help other entrepreneurs overcome the crisis through mentoring, employment, and consulting, formally or informally. Nevertheless, the author acknowledged that the ability to learn lessons after failure under stigmatization varies according to the individual (Singh et al., 2013).

A business failure is a lesson to learn not only for entrepreneurs but also for the people around them such as employees and managers (Bui, 2016). Being part of a startup that faces difficulties and consequently goes through a business failure, employees have

the experience of overcoming stressful situations and eventually develop patterns that are characteristic of entrepreneurial thinking and may be helpful in their future ventures (Bui, 2016). Shepherd, Patzelt, Williams, and Warnecke (2014) considered failures in particular projects from the perspective of employees in a large corporation, rather than from that of decision-makers. The author found that delaying the closure of the project was more painful for those working on it, but it allowed them to do a more in-depth analysis of what happened, that is, it intensified learning after the business failure. On the contrary, a sharp closing of the project and a rapid redeployment of participants to other projects caused less negative emotions but brought less experience to the team (Shepherd et al., 2014). Such entrepreneurial learning usually occurs through practical experience by trial and error, but also through communication with peers and seniors (Bui, 2016). Moreover, venture leaders usually endure a higher level of stigmatization in society than their subordinates, since people tend to believe that entrepreneurs have more control over the situation (Jenkins, Hellerstedt, Hunter, & Davidsson, 2014). Thus, employees can even take advantage of the experience gained through the venture's closure.

Social perception of the bankruptcy is an essential part of this topic because it can significantly affect the entrepreneur's professional identity, social connections, and future employment possibilities (Mandl et al., 2015). Mandl et al. (2015) examined the relationship between a businessman's failure attribution and the level of stigmatization in society. The hypothetical business failure situations proposed for evaluation by the participants of the study were bankruptcy and voluntary closure of the company. In both cases, there was less sympathy for scenarios in which entrepreneurs recognized the

internal locus of causality, had the situation of the failure under control, and declared that this could happen again (locus of stability) and that it was a specific failure (locus of globality). Participants found the locus of controllability, that is whether the failure was avoidable, the most important factor when determining the level of stigmatization towards this entrepreneur. Thus, if an entrepreneur admitted he could have avoided the business failure, higher stigmatization in society followed (Mandl et al., 2015). This is in line with Jenkins et al. (2014) who found that the community usually considers entrepreneurs more responsible for the business failure than their employees. The stronger the willingness to justify the entrepreneur or the employee after a failure is, the less responsibility the person is perceived to have had in the failure. The level of stigmatization is lower if an individual realizes that business failure can be inevitable and uncontrollable even for the leader of a venture (Jenkins et al., 2014). This explains why entrepreneurs suffer more from stigmatization than the workers they have hired (Jenkins et al., 2014).

For an entrepreneur to maintain a healthy state of mind after a business failure, many factors are significant. Mandl et al. (2015) found that stigmatization from society negatively affected the social activity of the entrepreneur. Internal attribution of blame also contributed to the person's mental state. The higher it was, the more motivated the entrepreneur was to create a new company (Yamakawa et al., 2015). This might explain the fact that many entrepreneurs start new businesses even before the actual bankruptcy of their previous venture (Dias & Teixeira, 2014).

Social Function of Business Incubators

Raheem and Akhuemonkhan (2014) called business incubators the catalysts of starting and developing firms that help young companies with expertise, networks, and tools for successful growth. Residents of business incubators usually have better opportunities for business growth and networking than companies working independently (Mansano & Pereira, 2016). Marimuthu and Lakha (2015) focused their attention on decreasing the costs of startups and giving them a supportive environment for the growth process while explaining the term “business incubator.” The main aim of setting up business incubators is to reduce the high failure rate that occurs during the business processes of most young companies (Lai & Lin, 2015).

Lai and Lin (2015) divided services that business incubators provide their tenants into two categories – resources services and project services. The first group included human resources, intellectual property, capital, networking space, and equipment, while the second was filled with business planning, executive strategy, and institutionalization. Raheem and Akhuemonkhan (2014), by analogy to the previous authors, differentiated business incubators’ functions into facilities, professional services like advice, counseling and mentoring, networking opportunities, and access to capital. There are three groups of business incubator services, and they intersect with the previously listed classifications: facility, counseling, and networking services (Marimuthu & Lakha, 2015). Mentink (2014) highlighted ten main functions of business incubators, combining the suggestions of all the above-listed authors but with more in-depth specifications such as business planning, finance, market development, team and personnel, legal, etc.

Business incubators tend to be essential elements of entrepreneurship in the economy, performing public functions and supporting startups in the early stages of their development, and such economic structures should be very accurate in choosing the right methods of providing services to young firms (Bruneel et al., 2012). Every young business has unique requirements (Lai & Lin, 2015). Marimuthu and Lakha (2015) provided data that shows the dependence, importance, and effectiveness of business incubators' facilities for their tenants. According to this model, residents are satisfied when the incubator offers facilities-related services, such as office equipment and buildings, and business related and networking services (Marimuthu & Lakha, 2015). Consequently, incubators should focus the services they provide tenants on the needs of residents and the spheres of business the startups are functioning in, because startups from different business spheres may need different services (Mentink, 2014). Managers of business incubators play a significant role in ensuring the added value of new organizations and defining the essentials for tenants (Raheem & Akhuemonkhan, 2014).

Business incubators are elements of the innovation systems of a country (Spigel, 2017). An increase in new jobs consistently leads to the enhancement of the tax base and improves the economic situation accordingly (Raheem & Akhuemonkhan, 2014). Moreover, most startups are focused on new technologies and innovative business decisions, so support of such enterprises leaves a positive mark on the production of goods and services, their exports and imports, and as a consequence the diffusion of innovation across the whole world (Raheem & Akhuemonkhan, 2014).

Transition

Russia's startup companies fail at high rates. Seventy percent of startup companies in Russia stop their business operations within three years (Безрукова et al., 2015). In this qualitative multiple case study, I have explored what market entry skills accelerated technology startup owners use to succeed in business beyond three years. This study is intended to help technology startups increase their survivability. Furthermore, an increase of the survival rate of technology startups beyond three years may have an impact on the socioeconomic situation of the areas of operation (Kane, 2010).

In Section 2 I present details of the methodology and design of the research project, as well as the population, sampling, and data management strategy. The following section will uncover the findings of the study and reflect on social change. In conclusion, I will provide a summary and recommendations for further research.

Section 2: The Project

Through a qualitative multiple case study approach, I have explored the market entry skills that accelerated technology startup owners need to succeed in business beyond three years. In return, this study can help technology startups increase their survivability with knowledge from research. In this section, I uncovered the project methodology and research approach and thoroughly described the tools, techniques, and instruments that I used.

Purpose Statement

This qualitative multiple case study aims to explore the market entry skills that accelerated technology startup owners use to succeed in business beyond three years. The target population is startup owners who completed an acceleration program from the Internet Initiatives Development Fund. This study may contribute to understanding how technology startups can increase sustainability and initiate key processes to create a strongly competitive, high-impact market entry strategy.

Role of the Researcher

I was the primary data collection instrument in this study, conducting interviews with each study participant. I am also related to the topic since I have been an owner and general manager of a small technology company with over 50 employees at the time the study was done. Since 2002, the company has specialized in software development and has provided technological and integrational solutions for enterprise resource planning and customer relationship management systems. Even though my company never attended an acceleration program, I am aware of its principles and the way acceleration

can influence a startup. I have also participated in various startup acceleration and business incubation events and have taken up the role of expert or mentor in some of them. My goal is to understand how to help a new venture sustain beyond the critical three-year valley of death period and stay in operation. My main objectives in the study were to achieve the following: (a) collect the data, (b) analyze the data, and (d) summarize and synthesize the results of the findings (Collins & Cooper, 2014; Malcolm, 2014).

All the participants in the study were independently and without any influence able to decide to take part in, ignore, or withdraw from the research at any moment as recommended by Hill and Rapp (2014). Each participant received all the information they needed to make such decisions. I treated each participant ethically, complying with the following principles discussed by Diener and Crandall (1978): (a) no harm to participants, (b) no uninformed consent, (c) no invasion of privacy, and (d) no deception. Throughout the research and after its completion I followed the Belmont Report protocol to minimize potential harm to participants. I was the only person who held identifiable information about the participants, including but not limited to their name and corporate information, and kept it confidential as recommended by Yin. I will store all collected data in a secure location for five years after conducting the research to protect the participant's rights.

A semistructured interview allows the participant to share information about the question without any limitations. To ensure maximum accuracy and mitigate my bias, I supported the interview data with other sources of information as recommended by Yin

(2015). By combining semistructured interviews, a review of company documents, reflective journal entries, and direct observation of management operations, I was able to minimize potential bias. Since the interview was the primary data collection instrument for this research, I used open-ended questions to ensure that the participant is not guided toward any direction and do not receive any ideas from me.

Participants

The purpose of this qualitative multiple case study was to explore the market entry skills that accelerated technology startup owners need to succeed in business beyond three years. A researcher must determine and select participants based on the goals of the study (Palinkas et al., 2015). To ensure that the researcher will collect valuable and relevant information, it is necessary to perform a purposeful sampling technique (Palinkas et al., 2015). To achieve comprehensive consideration of participants' experience, the researcher should use purposeful sampling (Benoot, Hannes, & Bilsen, 2016).

To participate in this study, a startup manager had to meet the following criteria: (a) be an owner of a technology startup in Russia; (b) successfully graduate from an Internet Initiatives Development Fund acceleration program; and (c) stay in business beyond three years from startup formation. To access the participants and gain initial information about their businesses, I used the information presented on the Internet Initiatives Development Fund website. This information is publicly available and includes the names and websites of accelerated startups. To gather information about the startups' addresses, cities, phone numbers, and e-mails, I used their websites. To collect

data about their years of operation and other general corporate information, I consulted the Russian Federal Tax Service database, which is also available to the public. I sent an e-mail to the participants with an invitation to take part in the research. I made follow-up telephone calls to verify their intention to participate in the study and to schedule interviews.

I recorded interviews using my personal mobile phone with a voice-recording application. After that, I transcribed the audio data into a Microsoft WORD document. The participants of the study had the opportunity to conduct a member check to verify and correct the findings as necessary, according to Ullrich, Sahay, and Stetler's (2014) recommendations. Marshall et al. (2014) noted that it is essential to establish a trusting relationship between researcher and participants to maximize the efficiency of collaborative work.

During the research, technology startup owners were also able to provide access to corporate documents for my review and allowed the direct observation of their business operations to collect data about their market entry strategy. The use of methodological triangulation allowed me to verify data from other distinct points to enhance the trustworthiness of the study results (see Heale & Forbes, 2013; Modell, 2015). Personal data was not collected from any sources throughout the research.

Research Method and Design

Bryman and Bell (2015) stated that research method and research design are fundamental elements that guide the researcher through the whole process. A researcher's decision-making at the initial stage, where he has to choose between qualitative,

quantitative, or mixed method, will affect the results (Bryman & Bell, 2015). For this study, I have chosen the qualitative research method.

Research Method

It is up to the researcher to decide which method he should use to achieve the results of the study (Palinkas et al., 2015). The chosen method should correspond to data collection and analysis strategy (Bryman & Bell, 2015). I selected the qualitative research method for the study to gain a better understanding of technology startup market entry strategy. Palinkas et al. (2015) stated that qualitative research methods are most suitable for learning the causes of success or failure and implementing an evidence-based approach to the research subject. I used a combination of semistructured interview, review of company documents, reflective journal entries, and direct observation of management operations and processes, which align with the concept of a qualitative exploratory multiple case study. The qualitative method is the best choice for this study not only to discover the core aspects of the problem (Palinkas et al., 2015) but also to discern individuals' personal experience related to the phenomena (Noble & Smith, 2015). Palinkas et al. (2015) indicated that a researcher attempts to disregard his outlook regarding the phenomenon in a qualitative study; because a qualitative research method is associated with investigating facts from individuals regarding the phenomenon, a researcher gains the advantage of a complete worldview (Palinkas et al., 2015). According to Marshall, Cardon, Poddar, and Fontenot (2013), the researcher can perform a detailed and meticulous analysis of data sources.

The analyses in similar doctoral studies revealed that the chosen method was relevant and applicable to this particular research. Koyagialo (2016) used a qualitative multiple case study approach to examine small business survivability beyond five years since company formation. Warren (2016) also used a qualitative multiple case study to examine small business strategies for sustainability beyond 10 years of the company in operation. Mellish (2016) applied a qualitative case study to explore skills that Liberian small business entrepreneurs use to succeed in business. Foster (2016) adopted a qualitative case study in studying women entrepreneurs and the keys to successful business development and sustainability beyond five years.

The quantitative method was not applicable to this particular study because the researcher may not fully understand the innovation ecosystem. The researcher cannot analyze market entry strategies because such approach requires larger samples and the need to isolate the phenomenon (Bannon, 2015; Parry, Mumford, Bower, & Watts, 2014). Multiple barriers exist in obtaining information from nonpublic companies, which prevent the researcher from performing a quantitative or mixed method study (Chen et al., 2011).

Research Design

This qualitative research uses a multiple case study design as a basis for understanding market entry strategy used by technology startup owners to succeed in business beyond three years. According to Palinkas et al. (2015), a qualitative study can include the following design methods: (a) case study, (b) ethnography, (c) grounded theory, and (d) phenomenology. While all research designs differ from each other, it is

up to the researcher to decide which one aligns well with the objectives of the study (Palinkas et al., 2015). A case study focuses on a particular situation or a system (Palinkas et al., 2015; Yin, 2015). Phenomenological research was not applicable to this study because it requires exploring the shared experiences of participants to deeply understand a common phenomenon (Yin, 2015). Similarly, ethnographic research was not appropriate because it requires examining the culture of a group of people, which is outside the scope of this study. Parry et al. (2014) stated that a grounded theory method is appropriate where no previous theory existed; since this research has no goal in theory creation, this method is also inapplicable to my study.

According to Fusch and Ness (2015), the researcher should incorporate data saturation strategies to verify that no new and relevant data is available for validation and quality improvement of the study. Yin (2015) suggested supporting interview data with other sources of information to eliminate potential bias. To achieve data saturation and eradicate potential bias, I used a combination of a semistructured interview, a review of company documents, reflective journal entries, and direct observation of the management operations and processes of technology startup owners, which are characteristic of a qualitative exploratory multiple case study design. Such approach complies with methodological triangulation, which aims to validate information from multiple sources (Heale & Forbes, 2013; Modell, 2015).

Population and Sampling

The target population was startup owners who completed an acceleration program from the Internet Initiatives Development Fund. The startup manager had to be an owner

or shareholder of a company that had successfully graduated from an Internet Initiatives Development Fund acceleration program. There was no income limit for the company, but it had to be in operation and generating revenue. According to the website of the Internet Initiatives Development Fund, (2017), there are 10 rounds of the acceleration program, with a total of 271 participants. I drew my sample of companies that had been successfully operating for over three years from this pool of accelerator participants. The sample size included three startup owners.

Sampling is the selection of individuals from a statistical population to evaluate the attributes of the whole population (Barratt, Ferris, & Lenton, 2015; Benoot et al., 2016; Palinkas et al., 2015). Purposive sampling was the most appropriate method for this qualitative multiple case study. Such an approach contributes the most to the research since it provides the most relevant participants and their cases, including those in the hidden population (Barratt et al., 2015).

The sample was determined from publicly available information at the Internet Initiatives Development Fund website, which also contains links to the corporate websites of prospective participants. I collected general business information, including telephone numbers and other contact information, from startup websites. I used the Russian Federal Tax Service database, which is also available to the public, to verify whether a selected startup complies with participant characteristics indicated in this research. I used a purposive nonprobability snowball sampling method to determine possible future subjects that meet the research criteria among existing ones (see Marcus et al., 2016). For this research, snowball sampling helped in gaining access to the startup

community and managers who are successful in terms defined by this study and who may be hard to reach or may even be hidden from an observer.

Qualitative researchers who use the case study method with semistructured interviews as the primary data source should be able to achieve data saturation (Marshall et al., 2013), which minimizes the risk of gathering incomplete and inaccurate research data (Tran, Porcher, Tran, & Ravaud, 2017). A sample size of three startup owners and the use of methodological triangulation provided the best opportunity to reach data saturation. During the data collection process, I continuously gathered information from multiple sources using a semistructured interview, a review of company documents, reflective journal entries, and direct observation of the management operations and processes of technology startup owners. I reached saturation and ensured that there was no more evidence to collect.

Ethical Research

The IRB approval number for this study is 12-11-17-0365739. The researcher must strictly follow all ethical standards through all phases of research. I thoroughly explained the purpose of the study to the participants and informed each startup manager of the research procedures they and their company participated in. The Participant Consent Form contains comprehensive information about the study and includes the following: (a) background information, (b) procedures, (c) voluntary nature, (d) risk and benefits, (e) payment, and (f) privacy. The participants confirmed their willingness by returning a signed Participant Consent Form. I also explained to all participants the

process of withdrawing from the research study. They were able to do so by notifying me in any form, in writing or verbally, at any time without penalty.

In compliance with the Belmont Report, I followed three general ethical principles: (a) justice, (b) respect for persons, and (c) beneficence. To guarantee that the names of the participants remain confidential, I ensured that the interview transcript and reflective journal entries do not contain any information that can identify them. I analyzed and synthesized all the data gathered from my review of company documents. All identification information were removed. Field notes from direct observation did not contain any personal information as well. I coded the names of the participants and other identification information, for example, *Participant I* or *Startup II*. All research data will be securely stored and accessible only to me. I will store printed documents in a secure file and digital data in an external disk drive for five years, after which I will destroy all the research data.

Data Collection Instruments

I was the primary data collection instrument for this study (Collins & Cooper, 2014). According to Yin (2015), a case study research design requires multiple data collection methods. I have used methodological triangulation to enhance the research by verifying its validity and reaching data saturation. I used data collection instruments such as (a) semistructured interviews, (b) review of company documents, (c) reflective journal entries, and (d) direct observation of management operations and processes.

Business researchers actively use semistructured interview questions in their studies. Ahmad and Alaskari (2014) conducted a research of small and medium

enterprises by including semistructured interviews in their methodology. Semistructured interviews provide the opportunity to gather and explore new ideas from participants (Chisholm, Mann, Peters, & Hart, 2013). Semistructured interviews offer the possibility of discovering a variety of views from participants (Gravetter & Forzano, 2015).

Appendix A contains the protocol I used for the semistructured interview data collection instrument. I used the protocol provided in Appendix B during the direct observation process.

To enhance the data gathered from semistructured interviews, I used secondary data collection instruments such as a review of company documents, reflective journal entries, and direct observation of management operations and processes. Direct observation allows the researcher to learn about people's typical daily activities and to identify themes and patterns of events in a case (Adamson & Wachmuth, 2014; Jaimangal-Jones, 2014). According to Dabić and Stojanov (2014), direct observation is field work that involves watching and listening during particular case stations at the research site. Reading and analyzing company documents can also support the direct observation and interview process (Owen, 2014). I used government reports, websites, archival records, and official statistical data to validate the semistructured interview and direct observation findings. By doing so, I was able to perform an in-depth analysis of market entry strategy used by technology startup owners to succeed in business beyond three years.

Data Collection Technique

The sources of data collection were (a) semistructured interviews, (b) review of company documents, (c) reflective journal entries, and (d) direct observation of management operations and processes. The participant recruitment and data collection process started from gathering initial information about startups that had completed an acceleration program from Internet Initiatives Development Fund website and consulting the startups' websites for contact information. The next step was verifying from the Russian Federal Tax Service database that the startups comply with the required criteria to participate in research, such as (a) date of startup formation and (b) past tax period revenue. Further on, I sent an inquiry of participation via e-mail or social media messaging and made follow-up telephone calls for confirmation. After receiving confirmation, I sent Participant Consent Forms through e-mail and scheduled on-site visits.

In my first visits, I performed a semistructured interview with the top managers of the companies (See Appendix A), who were among the owners or shareholders. The primary sources of data collection for the interviews were a recording device and, consequently, an interview transcript. During my on-site visits, I asked the owners to provide access to internal corporate documents that contain performance indicators, sales reports, business plans, and others that apply to the research topic. To reach data saturation in the review of company documents, I supported my research by examining publicly available documents in addition to those provided by the startups. Startup archives, the Internet, and government databases were primary data sources for the

review of company documents. During the visits, I directly observed management operations and process. I also kept notes in a reflective journal about my experience during observation. Once I gathered initial data, I was able to continue my work on the desk.

Data Organization Technique

The major issue in data management is the maintenance of data integrity, backup, and storage (Kennan & Markauskaite, 2015). A researcher must protect his computer and other personal electronic devices with a password while using them in public spaces (Mooney, Collie, Nicholson, & Sosulski, 2014). To comply with research standards, I will store data gathered from the study for a minimum period of five years before deleting them. I will securely store all the digital data on an external drive and will protect it with a password. I will also place all paper documents in a locked and secure place with no direct access. Once the minimum period of five years passes, I will delete all electronic data from the external drive and shred the paper-based documents.

Data Analysis

Data analysis is an essential part of qualitative research (Bannon, 2015; Kennan & Markauskaite, 2015). Kennan and Markauskaite (2015) stated that the researcher could collect, observe, and create data for research purposes from various sources. According to Yin (2015), the five-step data analysis involves (a) evaluating, (b) categorizing, (c) organizing, (d) analyzing, and (e) rearranging data to collect observation-based assumptions. To support the five-step data analysis, I used methodological triangulation. Heale and Forbes (2013) argued that a researcher enhances data analysis when he or she

performs methodological triangulation in a case study. To determine the market entry strategies accelerated technology startup owners use to succeed in business beyond three years, I used methodological triangulation and multiple data sources. Such sources were (a) semistructured interview, (b) review of company documents, (c) reflective journal entries, and (d) direct observation of management operations and processes.

In this research, I used a classic data analysis method. I categorized and stored concepts and ideas on separate sheets of paper. The mind map helped me analyze the data critically. Because the sample size included only three startup owners, I used Microsoft WORD and EXCEL along with Adobe Acrobat Reader to speed up the data analysis process. I also used NVivo 11 Starter Edition for faster coding since all the raw data is in electronic format. The concepts and ideas for themes came from a conceptual framework of the study. During the study, I disassembled raw data and then reassembled them by clustering and categorizing in compliance with the research concept of how acceleration programs influence the skills of owners of newly formed companies to succeed in business beyond three years.

Reliability and Validity

Noble and Smith (2015) stated that reliability and validity characterize the strength of the research data. Reliability refers to how the researcher can manage dependability (Munn, Porritt, Lockwood, Aromataris, & Pearson, 2014). The validity corresponds with the credibility, transferability, and confirmability of the results (Anney, 2014).

Reliability

Noble and Smith (2015) compared reliability to the trustworthiness, clarity, and transparency of a researcher's decisions. According to Munn et al. (2014), reliability corresponds to the researcher's ability to manage dependability. Gathering accurate data helps achieve reliability in qualitative research (Lewis, 2015). In this study, I enhanced dependability through (a) member checking of data interpretation, (b) transcript review, (c) interview protocol, and (d) direct observation of management operations and processes. I also ensured that the data is saturated to enhance the reliability of the research findings, which I was able to do by using multiple data collection instruments and verifying that there is no more evidence to collect.

Validity

According to Noble and Smith (2015), validity entails whether the findings accurately reflect the data. According to Anney (2014), credibility, transferability, and confirmability are trustworthiness criteria for qualitative research. Cope (2014) stated that data saturation is necessary to achieve trustworthiness. Here, I enhanced validity by performing the following: (a) member checking of data interpretation, (b) transcript review, (c) use of an interview protocol, and (d) direct observation of management operations and processes. According to Hadi and Closs (2015), methodological triangulation also enhances the credibility of the research. Self-description also increases the study's credibility and confirmability (Hadi & Closs, 2015). It is always up to a future researcher to determine the transferability of the research in a qualitative study. To

support the transferability of this research, I provided an in-depth description of my findings.

Transition and Summary

In this research, I explored the necessary market entry skills for accelerated technology startup owners to succeed in business beyond three years through a qualitative multiple case study approach. This study is intended to contribute to the community's knowledge of how technology startups can increase their survivability. This study can also be a basis for understanding the market entry strategies used by technology startup owners to succeed in business beyond three years. My goal was to understand what else can be done to sustain a startup beyond the critical valley of death period of three years and stay in operation. This section covered the project methodology and research approach as well as the tools, techniques, and instruments that I used. In section 3, I presented my findings and research results as well as recommendations for further studies.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple-case study was to explore what market entry skills did accelerated technology startup owners use to succeed in business beyond 3 years. I collected data from three semistructured interviews with successful startup owners whose companies had been in operation for more than three years. Those data were supported by (a) review and analysis of company documents, (b) reflective journal entries, and (c) direct observation of management operations and processes. I conducted interviews with the participants and performed direct observations from January 23, 2018, until February 28, 2018. Participants of the study were located in three different Russian cities: Moscow, Saint Petersburg, and Tomsk. The duration of interviews was from 30 minutes to 2 hours.

Presentation of the Findings

I collected and analyzed data to answer an overarching research question: What market entry skills do accelerated startup owners use to succeed in business beyond three years? The primary source of data was semistructured interviews with startup owners. Additional sources of data were reviews of company documents, reflective journal entries, and direct observation of management operations and processes. I used the Russian Federal Tax Service database to get financial data regarding the startup operations. I was able to identify four significant themes related to market entry skills and startups' survival ability beyond three years: (a) evolution of the entrepreneur, (b) sales

strategy, (c) acceleration impact, and (d) recommendations for accelerators and incubators.

Table 1

Frequencies of References Related to Themes

Themes	References
Evolution of the entrepreneur	18
Sales strategy	26
Acceleration impact	78
Recommendations for accelerators and incubators	5

Theme 1: Evolution of the Entrepreneur

I can divide the life of any entrepreneur into two stages: before and after he founded his startup. Semistructured interviews were used to discover the participants' backgrounds, allowing me to study their stories before they decided to launch their startups. A separate subtopic within this section is the knowledge and entrepreneurial competencies that owners gained during the acceleration process.

Background. During semistructured interviews, I was able to identify several shared similarities among the biographies of the participants of the study. The most interesting discovery was that they had all graduated from college with degrees in physics and mathematics. Two out of three had PhDs in these subjects. All of the participants mentioned that the challenging educational curriculum had provided a platform for the development of qualities that contribute to successful entrepreneurship, such as analytical and critical thinking and the ability to work intensively with large datasets and to overcome difficulties.

According to the semistructured interviews, all participants had work experience before they became entrepreneurs. Participants started their new ventures in the same business sectors in which they had previously worked. Such behavior is typical for serial entrepreneurs (Bauer, 2016; Mandl et al., 2016). In fact, for the participants, moving towards entrepreneurship meant continuing to develop their respective careers within the same field.

Another important fact was that all the entrepreneurs interviewed exhibited an active interest in their startups and drew inspiration from their work. Participant 2 mentioned that “the foundation of entrepreneurship is a commitment to implementation.” When participants were asked during semistructured interviews what the key qualities were that allowed them to be successful, their answers were the desire for self-fulfillment and diligence. Participant 3 clearly stated that “zeal is a key factor for entrepreneurial success.” Participant 2 noted that the main reason that he became an entrepreneur was that “he tried and had experienced success.”

Development of entrepreneurial skills. The successful startup owner has to change and learn new things continually (Bauer, 2016). My semistructured interviews revealed that the participants considered learning how to interact and communicate with people the most challenging part of becoming an entrepreneur. During the interviews, two out of three startup owners noted that the education they had received at university or college was insufficient to prepare them to become effective business leaders. Participant 1 stated, “I had to change significantly after graduation with a technical degree to be able

to work with people.” Participant 3 mentioned that he still had “insufficient managerial skills.”

Participants also changed their outlooks on life significantly over time. Participant 2 mentioned in a semistructured interview that “trips to innovation centers both in Russia and abroad, including Silicon Valley in California, helped me change how I conduct my businesses.” It seems that the impressions he received during such trips broadened his horizons and motivated him to keep going forward. Participant 3 also enriched his knowledge by “studying business literature and communicating with other entrepreneurs.” According to the interview, Participant 3 mainly developed his competences by “reflecting on mistakes.”

My research uncovered that, as part of the process of expanding their knowledge of management, including attending an accelerator, the startup owners had begun to implement such management tools as customer development and traction. The traction concept helps to assess how well an entrepreneur’s team can implement a project (Gonzalez-Uribe & Leatherbee, 2016). Participant 3 stated that he believed this concept “provides a basis for the permanent and systematic improvement” of his businesses. According to direct observation and field notes, Participant 1 and Participant 2 also used customer development and traction tools, but they did not mention these terms in the semistructured interviews.

According to the interviews, direct observation, and the analysis of company documents, all the startup owners in the research had started to use the customer development concept at some point in the process of developing their startups. Steve

Blank introduced a lean startup customer development methodology, which is an approach to creating new companies, products, and services (Haines, 2014). The concept is based on thoroughly studying and coming to understand the customer as well as identifying insights into (and the ulterior motives of) the customers and their behavioral patterns to develop a successful product, service, and business (Haines, 2014). The essence of the customer development methodology is to continually receive feedback about a product or service from real and potential customers, experts, competitors, and the market (Haines, 2014). The primary tools that participants use are expert consultations, problem-based and solution-oriented interviews, as well as the development of a minimum viable product.

In a semistructured interview, Participant 2 also noted that “chance played a significant role,” as his product was introduced just as a market need for such a solution began to form in sufficient volume for the startup’s survival. According to Participant 1, “continuous change” was a key survival factor. As mentioned by Participant 3, “diligence” affected success significantly more than his previous experience.

Theme 2: Sales Strategy

The basis for the existence of any business is the sales process (Lall et al., 2013; Lasrado et al., 2016). All of the interviewed startup owners managed to adjust the business process of sales management to a sufficient level for survival. As a result of the study in this section, I identified three main elements: sales at an early stage, hiring sales professionals, and the sales methods used.

Sales at an early stage. I was able to uncover the strategy that successful startup owners use to achieve the sales volume necessary for their survival. An important factor is the presence of a cofounder in the team who has sales experience. According to company documents and human resources records, all of the participants had such a cofounder on their teams. In the early stages of the startup lifecycle, such sales specialists delivered the first clients based on their networking connections. Having an established portfolio of clients from previous workplaces increases confidence in the newly formed company and its products (Franco, 2018). Minimum viable products are raw and undeveloped, and early adopters' trust in a startup can be increased by reputation and previous successful business experiences with the founder (Haines, 2014). According to company documents and human resources records, during the later startup stages, the cofounder supervised key clients, increasing the efficiency of sales.

In the early stages of a startup, one of the founders makes most of the first sales to an early adopter who believes in the future of the product and the company itself (Haines, 2014). Often, such sales occur when the product itself does not yet exist or is in the minimum viable product phase. The first clients usually get a raw product with a significant discount. At the same time, an early adopter helps the startup to improve its minimum viable product and to transform it into a fully-fledged market-ready solution (Haines, 2014). Such an approach to starting sales not only helps the startup to survive but also allows it to prepare to hire professional specialists. For sales professionals who are not cofounders, it is essential to be confident in the product. Participant 1 noted that “a hired sales manager effectively sells only if he sees the benefit to the customer and is

confident that the solution is economically viable and expedient.” This can also be because 67.3% of salary of sales specialists come from commissions or a combination of salary, commissions, and bonuses (DeConinck & DeConinck, 2017). Participant 1 mentioned that the “lack of successful cases complicates and slows down the sales process, reducing the income of the hired seller.”

Sales team development. According to corporate documents and human resources records, all of the startup owners started hiring professional sellers when the cofounder responsible for sales could no longer cope with the workload. According to the semistructured interview data and the review and analysis of company documents, startup owners started developing a sales department when their companies had made their first successful sales and their products received positive feedback from their clients. At this stage, the startups adopted new management procedures for hiring, training, and developing a team of sellers. Participant 2 stated that “human resource management played a key role in the process of attracting professional sales managers.” He further declared that “the skills that are inherent to professional recruiters are crucial at this stage of a startup’s lifecycle for quick and efficient scaling of the sales department.” One of the participants lacked experience in searching for and hiring new team members, while the other two had such experience. In the case in which there was no experience in recruitment among cofounders, the startup owners strengthened their team with an experienced human resources manager.

According to corporate documents, at some point, all three startup owners had to increase the number of employees engaged in sales to guarantee sustainable revenue. By

doing so, they were able to generate steady revenue streams, which was necessary for their survival. According to the semistructured interview data and review and analysis of corporate documents that reflected revenue, growth in the number of sales managers proportionately increased a company's revenue. At this point, the whole team of sellers identified the clients' problems and modified both the product and the sale process according to the market's needs.

From this stage in a startup's lifecycle, it is essential to create comfortable working conditions and an atmosphere of competition and excitement. During a direct observation, Participant 3 proudly showed off a row of empty 5-liter bottles of whiskey in the office. He said that he "organize[s] a party every time a sales team reaches a continuously growing monthly sales plan." Participant 2 had installed a ping-pong table in the office, and employees held competitions and entertaining tournaments based on the company's achievements.

Methods of sales. According to corporate documents, the first sales cases were made in the early stages of the startup's lifecycle by one of the cofounders supervising sales. The buyer willingly agreed to the transaction if he had the opportunity to study success stories in which a similar solution was put into practice in other companies. Participant 1 noted the "need for successful sale cases of our product from previous clients." The segmentation of clients also played a significant role. For early sales, all of the participants focused on a narrow segment of clients whose demand could be satisfied at the minimum viable product stage. Later on, with the growth of product features, startups entered new adjacent client segments.

According to the review and analysis of corporate documents regarding marketing and sales processes, the main client attraction tool was active sales. Participant 3 mentioned that the “active sales strategy is the most appropriated on the Russian B2B market.” According to corporate documents regarding marketing and direct observation, the primary tool of the sales process was the sales funnel.

Participant 1 noted that at some point in their startup’s lifecycle, they had used a sales approach based on hype. This approach places a potential client into a state in which he makes a purchasing decision based on the emotions and psychological tricks of the seller. Often, this approach involves partial or complete misleading of the client about the value of the product to keep him moving through the purchase funnel. Moreover, sales were made to clients who did not need the product. Such a deal closes only on the seller’s ability to manipulate the facts. According to semistructured interview data and corporate documents, all of the participants in this study noted that they had used hype partially or entirely at some point in the startup lifecycle. However, at some point in their startups’ lifecycles, startup owners completely discarded this method. Renunciation of the hype method of sales occurred because startup owners were emotionally disappointed by this approach and felt guilty. Also, Participant 1 came to an understanding of the impossibility of creating a sustainable business by selling a product that does not have value for a client, as well as the potential reputational risks this strategy entailed. Separately, Participant 2 noted the turnover of valuable sales professionals who were disappointed in the product and “did not want to mislead the client by deceiving him.”

According to direct observation of management operations and corporate documents regarding marketing, none of the startups used this strategy at the time when I was doing this research. I assume that all of the three researched startups had grown to the stage at which it would be impossible to continue using such a method without legal and reputational consequences for the companies and their founders. I also assume that during the hype sales stage, from the reverse wave of negativity from the client, the startup could obtain valuable information to modify, shape, and transform its product into one whose value satisfied the client's needs and allowed the startup to build a sustainable business. The question of how significant this phenomenon is for survival may be the basis for future research.

Marketing strategy. According to marketing documents, all researched startups provided services in the B2B sector in the information technology sphere. Specifically, these were services for automation and optimization of their clients' business processes. According to marketing documents, all three participants delivered products with an obvious advantage for their clients: a potential increase in sales. All participants had a business model that used recurring payments rather than one-time sales. This phenomenon deserves a separate study in the future into its influence on startups' survival and sustainable development. Presumably, projects that have regular clients with systematic payments overcome the threshold of three years of work more often than those that focus on one-time sales.

Theme 3: Acceleration Impact

At the stage of the startup formation, the owners were in search of programs, techniques, and tools that would affect their survival skills. The most often-considered alternative was the Skolvovo Innovation Center. Participant 1 noted that the “requirements for startups in the Skolkovo Innovation Center significantly exceeded business capabilities at the start.” Participant 2 considered Skolkovo Innovation Center but eventually refused to participate in its business incubator programs because he was not satisfied with the proposed support. Participant 3 mentioned that he had applied for participation, but “it was declined.” Participant 1 noted that his startup had studied the problem of incubation in Skolkovo Innovation Center, since this fund “is continuously appearing in the media in Russia as the leading platform for startups’ development.”

According to corporate documents, after failing to get into the programs of the Skolkovo business incubator, participants resorted to the help of the Internet Initiatives Development Fund, whose Acceleration Program for startup owners has become a platform for developing survival skills and entering the market. Being in the acceleration program affected the startup owners and their strategy. All participants noted receiving new information about up-to-date startup tools, such as customer development, minimum viable product, HADI-cycle, training for effective selling, and project tracking. The main declared goal of accelerating in the Internet Initiatives Development Fund accelerator was to attract third-party investments (Халывская, 2016). According to corporate documents, none of the researched startups received additional funding from Internet Initiatives Development Fund. During a semistructured interview, all the startup owners

noted that they had found financing from other sources during the acceleration process or after the end of the acceleration program, without using the support of the Internet Initiatives Development Fund. Participant 3 noted that he had received funding from an “alternative private investor.” According to corporate documents, Participant 1 and Participant 2 self-funded their businesses.

All participants noted that the acceleration program itself did not significantly affect their companies’ survival. Participant 2 mentioned that the “acceleration program did not impact the business strategy.” Participant 1 stated that the “influence was negative.” Participant 3 mentioned that the only significant factor was “the use of new tools.”

Nevertheless, the participants indicated that the acceleration program significantly expanded their own personal knowledge. All of the participants noted that they did not fully comply with the requirements and recommendations of the Internet Initiatives Development Fund but modified their models to fit their own visions of doing business. This can be interpreted as a refusal to blindly follow external recommendations in favor of a more balanced and deliberate management decision. Two out of three participants reported that even though they received additional managerial skills during the acceleration program, in general, they had already outgrown most of the skills taught in the program.

Marketing tools. According to semistructured interviews and direct observation, startup owners used a combination of three traditional tools for the development of their startups: customer development, testing, and scaling. Participant 3 reported that “problem

and solution interviews are the key sources of data for analysis and decision-making.”

Participant 1 and Participant 3 used HADI cycles for practical data analysis, in which a key role is given to metrics and clear measurement and the numerical expression of all key parameters of a company’s work. The data obtained were used to create and develop a minimum viable product. These customer development tools are generally available and widely used in the modern practice of startup development (Haines, 2014).

Theme 4: Recommendations for Accelerators and Incubators

All interviewed participants suggested recommendations for improving the process of acceleration and the work of the Internet Initiatives Development Fund to better develop survival skills in startup owners. Basically, they boiled down to the development of the social ecosystem around the fund. Separately, participants noted the need to develop direct relationships between participants and graduates of the acceleration program.

Creating a club system and a community of like-minded people. Regular activities aimed at communication and ice-breaking can help new startup owners to establish connections in the business environment. Such informal relationships among participants facilitate the exchange of experience and knowledge (Fehder, 2016). The entrepreneur greatly simplifies his task to enter the market and expands his knowledge about possible pitfalls by communicating with someone who has already walked a similar path. Such interactions within the community reduce the time to achieve a similar result (Fehder, 2016).

Participant 2 mentioned the concept of a “remote board of directors.” The board of directors or an advisory board makes critical decisions, and its members must intuitively feel how to satisfy clients and ensure that they continue to use and pay for the company’s services (Buys & Mbewana, 2007). A small board of advisors makes it possible to organize meetings as quickly as possible and make decisions that are very important for a young company (Jørgensen, 2014). As Participant 2 suggested during a semistructured interview regarding acceleration programs, the board of directors should include “representatives appointed by the accelerator, and only those who have had experience in establishing companies, managing them, or having experience of responsibility for profits and losses in a large company department.”

The acceleration program should be closer to the people it serves. All participants of the study noted that the methodology and approaches of people working in the accelerator were not transparent and not always clear. In particular, Participant 2 noted a “discussion of the successes and failures of an entrepreneur without his participation, and the information is brought back to startup owners in a limited form.” In the participants’ opinion, the accelerator’s employees hid some information from the incubated startups about the real states of their affairs, and one could feel an atmosphere of understatement. Also, Participant 1 mentioned that “the methods by which specific recommendations are accepted for a startup are not transparent.” Participant 2 had the impression that “most of the recommendations are subjective.” Such actions undermine the trust between the startup and the accelerator.

As a recommendation, Participant 2 indicated that the acceleration program “should be closer to the people it serves.” Also expressed was the need for disclosure of all information about the process of accelerating a startup, as well as making the methods of analysis and recommendations more transparent. Separately, Participant 2 noted the need to improve the level of business communication of the accelerator’s staff.

Creating several programs depending on the entrepreneur’s level of development. According to corporate documents regarding the acceleration program selected, participants differed from each other. Such an association created disorientation, as different participants were at different stages of business development, yet the acceleration program was the same for all. Participant 2 noted that “separation of companies into streams depending on the stage of maturity of the startup would help to meet the needs of each specific audience better.” The methods of the accelerator’s work and the positioning of its values could be different for different streams depending on the startups’ needs. Moreover, if this were combined with the concept of the club system, more mature startups could take an active part in sharing knowledge with colleagues: Startup managers in the later stages of development could give recommendations to those who have not yet completed this part of the journey. Participant 3 suggested that the “accelerator should have programs for startups at later stages of development.”

Creation of a suppliers’ ecosystem. As one of the most relevant ideas, participants suggested the creation of an ecosystem on the basis of the accelerator of proven and certified suppliers for all the needs of startups. During the semistructured interview, Participant 2 noted such “trusted service providers as designers, lawyers,

programmers, marketing managers, and database vendors could greatly facilitate and accelerate the process of bringing the product to the market.” Participant 2 also mentioned that the “supplier rating model could affect not only the companies participating in the acceleration but also certified suppliers that are not affiliated with the accelerator.”

Training and education. All participants noted that, in the development of entrepreneurial skills, it is necessary to develop soft skills such as responsibility, discipline, self-management, communication, and in particular, listening skills, teamwork, emotional intelligence, and critical thinking. A significant contribution to a startup’s survival could be the development of such skills. Acceleration Program managers should give special attention to the psychological type of each entrepreneur and select an individual approach to him.

Applications to Professional Practice

The results obtained during the research can provide startup owners with valuable information and knowledge regarding the skills that startup owners should develop to succeed in business beyond the first three years of operations. Startup owners and managers can apply the results of the study to enhance their marketing and sales strategies during the initial phases of the startup cycle. In addition, accelerators and incubators can get an insight into their actual performance and how they can add more value to their accelerating startups. The study uncovered typical tools that successful startup owners use to sustainably develop within the first years of operations, such as customer development, problem and solution interviews, and HADI cycles.

I was able to discover that the acceleration program did not have a significant impact on the startups' survival, marketing, or sales strategy, nor on human resource management. However, acceleration programs also influence their participants' worldviews, as they enrich startup owners' marketing tools and planning tactics. The overall results of the study show that the startup owners' critical factors for survival are (a) character, (b) previous experience, and (c) the ability to do their key business process better than anyone else on the market. These factors are the basis for success that allowed the startup teams that participated in the research to introduce a minimum viable product that could survive on the market. Furthermore, marketing tools and human resource strategy build upon these three factors to speed up startup growth in later stages but cannot lead to success alone without the base.

Implications for Social Change

The findings of the study could lead to positive social change among startup owners. The results could contribute to startup survival as well as exchanging successful experience among new entrepreneurs. Such influence would lead to small business development in society in general, which would positively affect new job creation (Koyagiolo, 2016). Business incubators and accelerators may uncover information on how to adjust and adapt their programs to better develop survival skills among entrepreneurs. The increasing number of successful businesses would contribute to economic development in the region (Holstein, 2015). For those people who plan to start businesses, this study could contribute by uncovering the successful skills they should develop before starting a startup.

Recommendations for Action

I suggest the following recommendations for action to different participants of the entrepreneurial ecosystem. Potential startup owners should focus on developing their entrepreneurial skills way before they decide to start a business. In the research, I found that critical thinking, emotional intelligence, charisma, resilience, and strong analytical skills play a significant role in entrepreneurial success. Future startup owners should start developing these skills as soon as possible and continue through their whole lives. People who are planning to be entrepreneurs should also focus on developing up-to-date labor skills that are in high demand among employers because they can convert such skills into a successful product or service in future. Startup owners should focus on converting their best abilities into minimum viable products that are in high demand on the market at the moment of their new ventures' creation. During the later stages of a startup, developing entrepreneurs should focus on marketing tactics and tools as well as human resource management to grow their businesses. Accelerators and incubators should adapt their programs depending on the needs of current or future entrepreneurs. Acceleration program managers should diversify their training programs and cover all stages of startup development. Such programs may start in high schools and colleges, where they can focus on developing high-demand labor skills and then move on to business education and support in later stages.

I also suggest that accelerators build an ecosystem of suppliers and combine it with the separation of startups into different programs depending on the entrepreneur's level of development. This could make it possible to organize a new approach to startup

training in the framework of the acceleration program through the concept of supplier development. Startups in the initial stage could be suppliers for companies that have already advanced to a further development level. More experienced companies would be able to develop a supplier and a future partner within the acceleration program. With this approach, the accelerator would provide startups with a reliable sales channel at an early stage of new venture formation. It would also provide an opportunity to develop a product or service with the parameters set by the future buyer. Communicating with more experienced partners, startup providers would be able to learn business directly from their more advanced clients. Such clients would be the first to test minimum viable products and would be able to give recommendations for improvement before entering the mass market.

Recommendations for Further Research

The possible inability to transfer the results of the current study to other countries leads to a recommendation for further research on accelerated startups around the world. Additionally, circumstances for technology startups accelerated by the Internet Initiatives Development Fund may differ from other those at technology parks, accelerators, and business incubators depending upon the industry in which they specialize. Research regarding various acceleration and incubation programs throughout Russia and other countries may uncover valuable information that was not found in this research.

The role of physics or mathematics education in entrepreneurship is an issue that deserves further research. I hypothesize that this phenomenon can be attributed to the education model in the USSR. Future research could uncover how the Soviet Union's

education model affected the survival skills of entrepreneurs and what the role of mathematical and physical education was.

The question of how significant the hype phenomenon is for startup survival may be the basis for future research. The research question of such a study could clarify the assumption that during the hype sales stage, the startup could obtain valuable information on the modification of its product from the reverse wave of negativity from the client. Such information could help to shape and transform a product or service into a more valuable version for the buyer.

Finally, the advantages of products with a recurring form of payment could also be a subject for further research. In my study, all of the interviewed startup owners had a business model that used recurring payments rather than one-time sales. Presumably, startups that have clients with systematic payments overcome the threshold of three years of work more often than those that focus on one-time sales.

Reflections

The reason I decided to undertake the challenge of a doctoral study and explore the market entry strategies of startup owners was a desire to enrich the entrepreneurial experience and bring new knowledge. A review of the literature regarding the topic of the study uncovered different theories and approaches as well as fundamental knowledge of new venture formation. The gap in the literature inspired me to explore what market entry skills allow startups to succeed in business beyond three years. My experience and knowledge of entrepreneurship significantly expanded during my work on this doctoral study. For instance, I have discovered interesting tools and techniques that I can use in

my work. Moreover, I was able to see different businesses and meet various people while doing this research, which increased my networking potential. The results of the study influenced my day-to-day work and contributed to continuous learning.

Summary and Study Conclusions

In this qualitative multiple-case study, I explored what market entry skills accelerated technology startup owners use to succeed in business beyond three years. The data collection methods were a semistructured interview, a review of company documents, reflective journal entries, and direct observation of the management operations and processes of technology startup owners. During the research, I collected data from startup owners who participated in management and completed an acceleration program from the Internet Initiatives Development Fund. This study's intention was to contribute to understanding how technology startups might increase sustainability and initiate critical processes to create a strong, competitive, high-impact market entry strategy.

The study discovered typical tools that successful startup owners use to sustainably develop within the first years of operations, such as customer development, problem and solution interviews, and HADI cycles. I was able to identify that the studied Acceleration Program did not have a significant impact on the startups' survival, marketing, or sales strategy, nor on human resource management. However, acceleration programs also influence their participants' worldviews, as they enhance startup owners' marketing tools and planning tactics. The overall results of the research indicate that the critical factors for startup owners' survival are (a) character, (b) previous experience, and

(c) the ability to do their key business processes better than anyone else on the market.

These factors are the key skills that allow a startup team to introduce a minimum viable product that can survive on the market. Marketing tools and human resource strategy are the second layer around these three core factors that speed up the growth in later startup stages.

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Appendix A: Interview Questions and Interview Protocol

Interview protocol

1. Introduce myself to the participants
2. Verify that the consent form is clear. Answer questions and concerns of the participant(s)
3. Turn on the recording device.
4. Introduce participant with coded identification. Indicate date and time.
5. Start the interview with the first question and continue until the final question.
6. Follow up with additional questions
7. Thank the participant(s) for their role in the study and end an interview.

Interview questions

1. What market entry strategy do you use to sustain your business beyond three years?
2. What are the main factors do you think have contributed to your success?
3. How did the acceleration program influence your business and strategic decisions?
4. What alternative to an acceleration program you have been considering when making a decision to enter one?
5. Is there anything else you want to share regarding the survivability of your business?

