

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/332268546>

# KEY SUCCESS FACTORS FOR BUSINESS INCUBATORS IN EUROPE: AN EMPIRICAL STUDY

Article in *Academy of Entrepreneurship Journal* · January 2019

CITATIONS

2

READS

3,576

2 authors:



[Onise Alpenidze](#)

Higher Colleges of Technology

9 PUBLICATIONS 53 CITATIONS

[SEE PROFILE](#)



[Alexandrina Maria Pauceanu](#)

45 PUBLICATIONS 113 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



The impact of dynamic capabilities on teaching strategies in higher education [View project](#)



Publications [View project](#)

# KEY SUCCESS FACTORS FOR BUSINESS INCUBATORS IN EUROPE: AN EMPIRICAL STUDY

**Onise Alpenidze, Higher Colleges of Technology, United Arab Emirates**  
**Alexandrina Maria Pauceanu, Higher Colleges of Technology, United Arab Emirates**  
**Shouvik Sanyal, Dhofar University, Sultanate of Oman**

## ABSTRACT

*Business incubators have been mushrooming in the recent past. There have been various studies on the impact of business incubators to the entrepreneurs and their diverse ideas. The major objectives of the study were to determine the factors affecting success of business incubators and identify impact level of those factors. An empirical study was conducted so as to insights and ideas. European business incubator managers interviewed, questionnaires were administered. Primary data was collected through the use of interviews with experts and questionnaires were administered to the entrepreneurs in Europe. Purposeful sampling was used to derive some expert knowledge and random sampling for the entrepreneurs. Data analysis was done using measures of central tendency, correlation analysis to identify the strength of relationship between dependent and independent variables, the ANOVA and regression analysis. The researchers found out that business incubators are of vital relevance during the start-up and growth of business. The present analysis empirically evidenced that three main factors such as availability and access to external financial resources, strong social and business networks, and internal strength including resources and capabilities positively affect and have a strong relationship with the success of business incubators.*

**Keywords:** Business Incubators, Empirical Study, Social and Business Networks.

## INTRODUCTION

A business incubator refers to a company that assists startup and new companies to develop through offering services such as office space or management training (Ruach & Hulsink, 2015; Siemieniuk, 2016; Krpalek et al., 2016). They differ from technology and research parks in their devotion to early stage and startup companies, as well as through the services/facilities they are providing. Because startup companies lack networks, experience, and resources, business incubators provide services that assist these companies to get through the initial hurdles that they are likely to encounter during the business startup process. Such hurdles include computer services, accounting services, legal services, funding, space as well as other prerequisites that are important to running the business. Some of the services that are common to business incubators include the management of intellectual property, help in regulatory compliance, assistance in the commercialization of technology, assist with business etiquette, the identification of the management team, advises the mentors and the board, offers the training programs that are comprehensive to a business and access to venture capital or angel investors. The services also include linking the business to the strategic partners, assist with the business basics, and market research, access to guarantee program, loan funds and bank loans as well as offering the networking activities (Tvaronaviciene et al., 2017). Put it simple, the technology and

research parks offer mainly physical infrastructure, meanwhile business incubators offer know-how and networking during incubation and post-incubation period.

Broadly speaking, business incubators can be categorized into venture builders, startup studio, corporate accelerator, seed accelerator, public incubator, kitchen incubator and virtual business incubator. A startup studio refers to a business incubator that is characterized by interacting portfolio companies. A virtual business incubator refers to an online business incubator. A kitchen incubator refers to a business incubator that focuses on the food industry. A public incubator refers to a business incubator that focuses on the public goods. A seed accelerator refers to a business incubator that concentrates on early startup businesses. Corporate accelerator refers to a program that is composed of large companies that are responsible for acting as akin to the seed accelerators.

Incubators are traditionally linked with economic development (Ratinho & Henriques, 2010) and intend to support new firms during their uncertain start-up phases (Aernoudt, 2004). For this, they offer office space, shared support services such as administrative and logistic services, business support and networking opportunities (Bergek & Norrman, 2008). By stimulating the development of start-up firms, economic development agencies expect to enhance job creation, employment growth (Fonseca et al., 2001), and the development of innovative products and services (European Commission, 2000; Schwartz & Hornych, 2010). Thus, incubators have become an intrinsic part of the framework for developing industries, especially small enterprises and governments as well as private sector companies have been actively involved in devising policies and frameworks to start, support and sustain business incubators.

## **STATEMENT OF THE PROBLEM**

Business incubators have grown in size and scope in all parts of the world. Their contribution to economic development and job creation is well documented. The need for evaluating the performance of these incubators as well as analyzing the factors behind their success or failure have also grown proportionately over the years so as to understand the effect that these incubators have on the enterprises that they house and also to be able to replicate successful models elsewhere. Unfortunately, incubator performance evaluation has been plagued by methodological, theoretical and empirical limitations (Yu & Nijkamp, 2009), which makes it extremely difficult to draw meaningful conclusions from current research on incubator performance. Moreover, incubator performance measurement seems to occur in a wide variety of ways. The factors behind their success also vary widely according to geography, industry and various other factors. Consensus as to incubator performance measurement has not yet been reached and even a clear overview from the available literature on the factors affecting the success of incubators is lacking.

This research paper aims, through review of the existing literature and other statistical methods to address this gap especially with reference to business incubators in Europe. The study also aims to identify the key factors both internal and related to support and funding that play a crucial role in determining the extent of success in achieving the objectives of the incubator. An attempt is also made to understand the perspective of the incubator managers through structured interviews in order to gain an insight as to what they feel are the key factors that should be measured to determine the success of the incubator.

## **LITERATURE REVIEW**

The subsequent literature review focuses on the impact of non-financial and financial support on a startup business growth as these constructs are seen as major contributors to the stability and success of incubators. (Adamowicz & Machla, 2016; Ivanová, 2017; Zygmunt, 2018). The types of startups advantage that come from the support, as well as their subsequent success, have been discussed. The developed community has supported the thought that a wealthy private sector is important for economic growth for quite a long time (George et al., 2014, Donaldson & Pauceanu, 2017). Startup projects have been considered as the drivers of economic growth hence playing a major role in entrepreneurship especially in the developing nations (Kozubíková et al., 2017; Bilan, 2017a:2017b). Business project growth has been summoned as the source of some novel productive investments and employment as well as the basis for poverty eradication and growth. However, despite their huge potential enterprises face some challenges that are related to the access of services, finance, and resources hence limiting their growth potential. Non-financial and financial services to support business projects during their growth and startup stages are being offered by the business centers, microfinance organizations, nongovernmental organizations, and governments (George, 2015; O'Leary, 2015). Though the services are widespread out and common, the act of measuring the impact of business monitoring, training, investment and incubation are limited due to challenges that are encountered during the process.

The business incubators have thrived since their materialization more than fifty years ago resulting in the inclusion of many incubation practices that convey the values that are critical to the businesses. Marlow & McAdam (2015) described business incubation as a process that aims at supporting the scaling and the development of a growth-oriented enterprise during its early stage. The same views are shared by Ayatse et al. (2017) who regard business incubation as a solid tool for survival and growth of businesses. Moreover, according to Marlow & McAdam (2015), the process offers the entrepreneurs a conducive environment during the startup stage, assists in reducing the costs that are associated with launching a business, increase the entrepreneur's confidence as well as linking the entrepreneurs to the networks and resources that are necessary for scaling a business. Thus, according to these authors, business incubation accelerates the growth of a business, generates economic and social benefits and saves money and time for the business.

A standard methodology for measuring the performance of the business incubator is yet to be established hence creating a challenge when making a comparison between studies (Albort-Morant & Ribeiro-Soriano, 2016). Academic researches on business incubators portray the difficulty in responding to questions that are associated with the positive impact of business incubators. The number of knowledge's resources available for measuring the impact of business incubation is also limited. It is difficult to assess incubation since its results may take a long period to materialize. On average, a business/start-up can take an incubation period of about two to three years and if an individual would wish to measure the growth and the viability rate of the incubated firm would have to wait for another four to five years after graduation. Some researches capture the whole impact of the business incubation ignoring the subsequent activities and the entrepreneurial learning that are likely to be caused due to the fall of the business. The studies that were conducted in Romania indicated that the growth rate in job and revenue creation does not take place up to between four and seven years after the graduation. Measuring the impact tends to be more complicated in the developing nations where the process of business incubation is a new concept (Dutt et al., 2015).

Another problem is a control group. The growth rate of business could be measured against a benchmark in the industry, but it is hard to come up with a control group that can be used in testing the performance of the incubates. Additionally, the business ideas that are accepted by the incubators tend to possess an innovate component that makes it harder to identify other cases for comparing the outcomes. Lack of enough data is also as a result of the fact that some business incubators fail to track their outcomes beyond the number of businesses they graduate. For the incubators that track the results, the data is not reliable. Besides these, there is no consensus on the key factors that are directly related to the success of the business incubators.

### **Availability of and Access to Funding**

Access to funding is a major component in creating an economic environment that is conducive for the growth and the development of business. Imperfections in the financial and the credit market, lack capital and credit constraints have been branded as the major constraints towards the growth of an enterprise. In the developing nations, the small and the medium enterprises face major constraints in the process of accessing finance. Some of the constraints include high collateral requirements, high capital cost as well as poor experience with the financial intermediaries.

Evidence reveals that the financial obstacle affects the small enterprises more than the large enterprises. They not only report a higher financing obstacle but also adversely affected by the obstacles (Kljucnikov & Belas, 2016). Koch, et al. (2016) found out that the financial constraints reduce the growth of a large business by 6% while reducing that of a small business by 10%. Additionally, lack of access to the various forms of financing like long-term finance, leasing, and export tends to be more constraining to the small businesses (Koch et al., 2016). Due to this extent, the small enterprises embody much of the economy's latent dynamism and a financial system that is weak thus taking the nation to a slower growth path.

The accessibility to external finance has been associated with some startups, firms' dynamisms as well as innovation. The distribution size for the firms tends to be affected by the accessibility to the external finance. The entry of the small businesses to the financial development aids is more than that of the larger firms but the small businesses struggle more so as to acquire finance when the environment is not strong (Howard-Grenville et al., 2014). A survey on the investment climate by Howard-Grenville, Buckle, Hoskins and George indicated that the access to finance increases the performance of the business. The access does not only help the entry to the market risk reduction and the companies' growth but also promotes the entrepreneurial activities and innovation. Additionally, businesses that have greater access to capital have a greater opportunity for exploiting the investment and growth chances. The same idea was developed by Ivanova (2017) proving empirically that small and medium sized enterprises have difficulties to access financial sources to support their ideas and operations due to various reasons.

Batjargal et al. (2013) clearly indicated that firms that operate in industries that are financially dependent tend to grow faster. However, new and small businesses in developing nations are rationed to equity and credit since they operate in financial markets that are not developed. While inaccessibility to finance tends to affect small enterprises in nations with basic weaknesses in the environment of their institutions, evidence suggests that small businesses benefit in a manner that is not proportional regarding observing their limitations relaxed as the financial system develops.

Taking into the consideration the importance of availability of funding for small enterprises and start-ups can be also an important factor for business incubators as they are perceived by incubates as tools for facilitating with external funding institutions. Hence, availability of external funding can be one of the success factors for business incubators to attract start-ups and successfully assist them to establish and grow in the market.

### **Social and Business Networks**

Social and business networks are considered to be the key resources for business incubators for the purpose of discovering opportunities and improve effectiveness for entrepreneurs, especially in the case of scarce resources. The social networks give special privileges to business incubators and their clients by shortcutting the way and saving valuable time regarding decision making factors and expediting processes (Fernandez-Perez et al., 2013).

Regarding business network of business incubators, this can provide access to mentors, business partners and support during incubation and post-incubation period. It works well hand in hand with social network, because it will enhance the possibility and probability for success. These two networks can be in the shape of formal or informal partnerships with private, NGO or government institutions.

A systematic review that was conducted by Gammon (2014) revealed some benefits that the mentees and the mentors acquire from the mentorship program. The benefits that are acquired by mentee include improved productivity and performance, improved skills and knowledge, greater well-being, empowerment, and confidence, improved motivation and job satisfaction, enhanced decision-making skills and faster learning, improved understanding, improved innovation and creativity, development of the leadership qualities and a positive risk-taking attitude. On the other hand, some of the benefits that are acquired by the mentor include improved performance that is brought about by enhanced knowledge and understanding, increased enterprise activities, networking and sales, increased knowledge enhancement and ideas generation, enhanced job satisfaction and confidence, new skills and knowledge, positive attitudes towards change, improved motivation and rejuvenation as well as the fulfillment of the human psycho- social needs. The business also acquires some benefits such as better project management, problem-solving skills, change and innovation, facilitation of partnership and the strategic change. To develop new technologies and generate knowledge/innovation with the purpose of gaining competitive advantage, these partnerships are vital (Fernandes et al., 2016).

### **Availability of Internal (Non-Financial) Resources and Capabilities**

From the reviewed literature (Fernandes et al., 2016; Apa et al., 2016), we can conclude that the internal resources (non-financial) and capabilities play a major part in the success of the incubator. Of course, these alone could not contribute to successful incubation and they have to be complemented with managerial skills and all the factors already discussed previously.

Researchers have discovered that providing adequate facilities and capability to conduct/deliver training programs to the specific needs of the incubates is among the major success factors of an incubator. Existing literature also provides insights of importance of training programs. Some of the major providers of the business training include the business centers, the microfinance organizations, nongovernmental organizations and the government. Though the training services are widely spread out and common, measuring its impact is not

common due to the challenges that are associated with the process of measuring the impact (Liden et al., 2014).

The main challenge in measuring the impact of the business training is the fact that the training varies in the mode of offering as well as what is offered across organizations and locations. The variation has led to the introduction of high ranks of heterogeneity making it hard to compare across different programs. The other challenge is about the fact that the training impact is likely to differ depending on the receiver. The training programs are also delivered through various channels and in different ways. The most common method is the training that is based on the classroom and it is mostly offered by banks or microfinance organizations to their customers (Bullough et al., 2015). The method has been applied in training female enterprises owners since the majority of the microfinance customers are women.

Research that was conducted by Bullough et al. (2015), revealed that the survivor likelihood of business 12 months after training is 9%. They also found out that the probability of one becoming a business person is strongly motivated by formal education and apprenticeship. According to the evidence that they collected, training enables a poorer and a less analytically able person to start a business and might prop up survivorship of the businesses that are not very profitable.

Dutt et al. (2015) found out that the application of the rule-of-thumb training leads to an enhancement in persons reporting that they detach the business expenses and the personal expenses thus calculating revenue in a formal manner and maintaining the business records. The research also indicated that graduates successfully improved or adopted the skills that were taught during the business training. Some of the skills include computer skills, marketing skills, accounting skills and the business planning skills. Evidence reveals that business training impacts positively regarding business sales or profit. Michaelson (2015) compared the two major indicators of business performance after and before the business training programs. The two indicators are gross profit and value added. According to Michaelson, those who participated in business training indicated a higher business performance and growth rate after undertaking the training than those who did not take part.

Another crucial factor impacting success is the quality of the management appointed to operate them. The team leader should have a business background and entrepreneurial skills, a flair for leadership and organization and be well networked in the community. The management team should be given measurable objectives against which performance can be monitored and incentives should be offered to managers to encourage and award outstanding performance. Incubators must recruit and appropriately compensate management capable of achieving the mission of the incubator.

Incubators should operate as viable businesses, with their own sources of sustainability such as taking equity, royalties and even ongoing subsidies. The ultimate test of success of an incubator is whether it can be self-sustaining. Incubators should be dynamic models of sustainable, efficient business operations. Financial sustainability is a key to long term success and growth.

On the basis of the literature review given above, we arrive at the following hypothesis:

*H0: There is no significant relationship between availability of internal resources (non-financial) and capabilities, social and business network, availability and access to funding and business incubator success.*

*H1: There is significant relationship between availability of internal resources (non-financial) and capabilities, social and business network, availability and access to funding and business incubator success*

## RESEARCH METHODOLOGY

### 1) Identifying Dependent and Independent Variables

The present research study adopts an empirical research design as the researchers are keen on analyzing main impact factors on business incubator success. According to the literature review conceptual framework and hypothesis derived the following are identified as variables of the study:

#### A. Independent variable:

- a. Availability of internal resources (non-financial) and capabilities.
- b. Social and business network.
- c. Availability and access to funding on the success of business incubators.

#### B. Dependent variable:

- a. Success of business incubators.

### 2) Data Collection Methods

Primary data was collected through interviews and questionnaire method. A sample of 30 European (EU and non-EU) incubator managers were interviewed, and structured questionnaires were distributed to 800 entrepreneurs. 612 entrepreneurs responded, which corresponds to a surprisingly high response rate of 76.5%.

Two types of sampling designs were used in the study. Purposeful sampling was used in the case of the incubator managers and simple random sampling was used for the entrepreneurs. The questionnaire had 24 items to measure the impact of the three independent variables. Primary data was collected through January–March 2017.

### 3) Data Analysis Methods

Quantitative data analysis was applied to the study. Central tendency, Correlation and ANOVA analysis were used to find the relationship between the independent t (business incubator success) and dependent variables and the impact of the dependent variables on the success of business incubators

## RESULTS

After evaluating the analysis before and the interviews data, the results are presented below. Correlation analysis applied to independent and dependent variables revealed the Table 1 following:



<b>Table 1</b>				
<b>CORRELATION ANALYSIS</b>				
	<b>Internal resources (non financial) and capabilities</b>	<b>Networks</b>	<b>Funding</b>	<b>Success of Incubators</b>
Availability of Internal resources (non financial) and capabilities	1			
Social and business network	0.807	1		
Availability and Access to Funding	0.439	0.471	0.377	
Success of Business Incubators	0.809**	0.437**	0.647**	1

Note: \*\*Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis between availability of internal resources (non-financial) and capabilities and success of business incubators shows that the correlation coefficient (r) is 0.809. This demonstrates that there is a highly positive and very significant relationship between availability of internal resources (non-financial) and capabilities and success of business incubators.

The correlation coefficient (r) between social and business network and success of business incubators is 0.437. This reveals that there is a very significant correlation between these two variables.

The correlation analysis to find out relationship between availability and access to funding and success of business incubators reveals that the correlation coefficient (r) between these two variables is 0.647, which in turn indicates a positive and significant relationship.

Furthermore, we proceed with the Model summary and ANOVA regression model of the data and the results are showed on Tables 2 & 3 respectively.

<b>Table 2</b>				
<b>MODEL SUMMARY</b>				
<b>Model</b>	<b>R</b>	<b>R square</b>	<b>Adjusted R square</b>	<b>Std. Error of the Estimate</b>
1	0.623 <sup>a</sup>	0.389	0.260	0.058

Note: a: Predictors: (Constant) Availability of Internal resources (non financial) and capabilities, Social and business network, Availability and Access to Funding.

From Table 2, it's seen that Regression Coefficient 'R'=0.623 or 62.3% of relationship exists between the independent variables and the dependent variable. The coefficient of determination  $R^2=0.389$  which shows that 38.9% of variation in business incubators' success is explained by availability of internal resources (non-financial) and capabilities, social and business network and availability and access to funding.

<b>Table 3</b>					
<b>ANOVA<sup>a</sup></b>					
	<b>Sum of Squares</b>	<b>df</b>	<b>Mean</b>	<b>F</b>	<b>Sig.</b>
Regression	0.0414	4	0.01036	3.0264	0.043 <sup>b</sup>
Residual	0.065	19	0.0034		
Total	0.1064	23			

Note: a: Predictors: (Constant) Availability of Internal resources (non-financial) and capabilities, Social and business network, Availability and Access to Funding.

b. Dependent Variable: Business Incubators Success.

From Table 3 it can be seen that the F value is 3.0264 and is significant because the significance level is  $=0.043$  which is less than  $P \leq 0.05$ . This implies that the overall regression model is statistically significant, valid and fit. The regression model implies that all independent variables are explaining that is a positive and significant relationship with dependent variable.

The below Table 4 presents coefficient of regression between availability of internal resources (non-financial) and capabilities, social and business network, availability and access to funding and the dependent variable that is success of business incubators at a confidence interval level of 95%. The t-availability of internal resources (non-financial) and capabilities is 4.23 (p value of 0.025) is greater than the critical value. Similarly, t-values for social and business networking as well as availability and access to funding are 4.58 and 4.40 respectively (p value of 0.013 and 0.020 respectively) which are greater than the critical value.

After all the analysis, we can confirm that *Hypothesis H1: "There is significant relationship between availability of internal resources (non-financial) and capabilities, social and business network, availability and access to funding and business incubator success."* has been tested and accepted as true.

<b>Table 4</b>					
<b>Regression Coefficients<sup>a</sup></b>					
	<b>Unstandardized coefficients</b>		<b>Standardized Beta coefficient</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>			
Constant	10.816	1.14		8.93	
Availability of Internal resources (non-financial) and capabilities	0.23	0.046	0.295	4.23	0.025
Social and business network	0.34	0.068	0.361	4.58	0.013
Availability and Access to Funding	0.27	0.051	0.308	4.40	0.020

Note: a: Predictors: (Constant) Availability of Internal resources (non-financial) and capabilities, Social and business network, Availability and Access to Funding.

## Interviews of Incubator Managers

Focusing on the qualitative analysis now, there was one comprehensive question asked to the incubator managers (what is your view on business incubation?). The general theme given by the experts was that business incubators are necessary more so at such a time. The dynamism in the business world was the main reason for the need of the business incubators. However, the managers were against the growth of a conglomerate incubator. They felt that there is a need to have different incubators specializing in niche fields, to give specific and due attention to every idea and with the respective experts in the particular field or sector. The entrepreneurs in Europe also affirmed that business incubators are essential during the startup and the growth period of a business. According to the experts' interviews and observations, we can state that managerial specialization as well as experience are vital for the success of a business incubator.

## DISCUSSION

Business incubators provide services that assist companies to get through the initial hurdles that they are likely to encounter during the business startup process. Such hurdles include computer services, accounting services, legal services, funding, space as well as other

prerequisites that are important to running the business. Some of the services that are common to business incubators include the management of intellectual property, help in regulatory compliance, assistance in the commercialization of technology, assist with business etiquette, the identification of the management team, advises the mentors and the board, offers the training programs that are comprehensive to a business and access to venture capital or angel investors. The services also include linking the business to the strategic partners, assist with the business basics, and market research, access to guarantee program, loan funds and bank loans as well as offering the networking activities. Unlike the business assistance programs, the business incubators do not offer their services to all or any company. Entrepreneurs who possess the wish to join an incubation program are obliged to apply for the admission. These business incubation programs are sponsored by the government entities, the economic development organizations as well as the academic institutions. Business incubators are important during the startup and growth of a business. Business training and mentorship are also important for the survivorship of a business. The study found that imperfections in the financial and the credit market, lack of capital and credit constraints have been branded as the major constraints towards the growth of an enterprise. This is in line with the findings of Isabelle (2013), Al Mubarak (2014) & Roseira (2014). Other constraints include high collateral requirements, high capital cost as well as inadequate experience with the financial intermediaries. Training and mentoring are also major strategies of the support that is given to the small businesses in the world. Through training and mentoring that is offered by business incubators, businesses are able to survive the constraints during the startup and the growth stage.

### **Implications of the Study**

To improve on the efficiency and the effectiveness of the business incubation programs, innovators ought to come up with new techniques that will enable online business training as well as online monitoring. This will enable the information to reach a wide range of people hence enabling the entrepreneurs to achieve their goals in business.

In order to be able to provide professional and helpful assistance to incubatees, it is important that business incubators understand main constructs for their success. The current research provided empirical evidence on success factors of business incubators. Namely, research data collected in Europe and analyzed further through qualitative and quantitative methods, showed that major constructs such as availability and access to funds, non-financial resources and capabilities, having strong social and business networks are critical factors to run a business incubator. Thus, it is important to understand these factors well before one starts drafting the project to start incubation activities.

Of course, the current research has only revealed main insights for business incubators success; however, it is a good background for further research that would reveal and identify empirically sub-constructs for each independent variable derived during this research. Managers of incubators can also use this research to improve their services and be more successful in the market. Startups also gain from the current findings as they can choose the incubators that comply with the requirements analyzed and derived by the current research.

### **CONCLUSIONS AND RECOMMENDATIONS**

The research reconfirmed many of the existing theories regarding business incubation. The main objective of this research was to identify success factors for the business incubators.

The current study empirically proved that three main variables such as availability and access to external financial resources, strong social and business networks, and internal strength including resources and capabilities, positively affect and have a very strong relationship with the success of business incubators.

Taking into consideration the research outcome we recommend business incubators to focus on developing their strength through enhancing their resources and capabilities, establishing and maintaining strong social and business networks, constantly strive to attract financial resources. The latest can benefit from the latest technological trends around the world crowdfunding and crowdsourcing, micro-investments, gamification, WEB 3.0—the new generation of business incubators is one click away. We can easily observe that projects like SeedSR, FundedByMe, Fundable, Kickstarters, AngelList and so on, are extremely successful and attract millions in micro-investments.

From our knowledge derived from current empirical research result and general industry and industry and scholarly practice, to increase the efficiency and effectiveness of business incubators, we suggest the following strategies:

1. Locating a business incubator in each technology or research park and/or free economic zones along with a FabLab (According to FabLabs foundation, a fablab “*Is a technical prototyping platform for innovation and invention, providing stimulus for local entrepreneurship*”). Meanwhile the technology parks, research parks and free economic zones provide mainly physical infrastructure, the business incubators will contribute to the success of the companies through know how, extensive network and mentorship programs.

2. Introducing regional models of incubation—due to several regional specificities, the incubation model should be customized according to local structure for enhancing entrepreneurship, culture and economic development.

3. Specializing incubators per regions, according to the specific of each region and/or its potential for development, having maximum 2 different related industries (exception the business incubators located in the free economic zones which need to be diversified and having a managerial board with diverse specialties). This characteristic will make them easier to manage and will contribute to their success.

4. Shifting slowly from brick-and-mortar towards online incubators, partially or totally. This movement will reduce costs for all involved parties, will make the communication process easier and might offer some special facilities (like experts from other countries which can be available at one-click distance).

5. Creating country or regional level business incubators associations to support and promote the projects, offer specialized assistance to new projects, assist the government to improve the laws and regulations regarding incubation, etc.

## REFERENCES

- Adamowicz, M., & Machla, A. (2016). Small and medium enterprises and the support policy of local government. *Oeconomia Copernicana*, 7(3), 405-437.
- Aernoudt, R. (2004). Incubators: Tool for entrepreneurship? *Small Business Economics*, 23, 127-135.
- Albort-Morant, G., & Ribeiro-Soriano, D. (2016). A bibliometric analysis of international impact of business incubators. *Journal of Business Research*, 69(5), 1775-1779.
- Allam Ahmed, P., Mubarak AL-Mubarak, H., & Busler, M. (2014). Incubator successes: Lessons learned from successful incubators towards the twenty-first century. *World Journal of Science, Technology and Sustainable Development*, 11(1), 44-52.

- Apa, R., Grandinetti, R., & Sedita, S.R., (2016). The social and business dimensions of a networked business incubator: The case of H-Farm, *Journal of Small Business and Enterprise Development*, 24(2), 198-221.
- Ayatse, F.A., Kwahar, N., & Iyortsuun, A.S. (2017). Business incubation process and firm performance: an empirical review. *Journal of Global Entrepreneurship Research*, 7(1), 72-85.
- Batjargal, B., Hitt, M.A., Tsui, A.S., Arregle, J.L., Webb, J.W., & Miller, T.L. (2013). Institutional polycentrism, entrepreneurs' social networks, and new venture growth. *Academy of Management Journal*, 56(4), 1024-1049.
- Bergek, A., & Norrman, C. (2008). Incubator best practice: A framework. *Technovation*, 28, 20-28.
- Bilan, Y., Mishchuk, H., & Dzhyhar, T. (2017a). Human capital factors and remuneration: Analysis of relations, modelling of influence. *Business: Theory and Practice*, 18, 208-214.
- Bilan, Y., Mishchuk, H., & Pylypchuk, R. (2017b). Towards sustainable economic development via social entrepreneurship. *Journal of Security and Sustainability Issues*, 6(4), 691-702.
- Bullough, A., de Luque, M.S., Abdelzaher, D., & Heim, W. (2015). Developing women leaders through entrepreneurship education and training. *The Academy of Management Perspectives*, 29(2), 250-270.
- Donaldson, W.J., & Pauceanu, A.M. (2017). Marketing challenges for South African public-sector business incubator. *Journal of Competitiveness*, 9(4), 19-39.
- Dutt, N., Hawn, O., Vidal, E., Chatterji, A.K., McGahan, A.M., & Mitchell, W. (2015). How open system intermediaries address institutional failures: The case of business incubators in emerging-market countries. *Academy of Management Journal*, 59(3), 54-87.
- European Commission (2000). *Communication from the commission to the Europe Parliament, the Council, the European Economic and Social committee and the committee of the regions-ICT standardization priorities for the digital single market*. Brussels: European Commission.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75-93.
- Fernandes, C.C., Miranda Oliveira J.M, Sbragia, R., & Borini, M., (2016). Strategic assets in technology-based incubators in Brazil. *European Journal of Innovation*, 20(1), 153-170.
- Fernandez-Perez, V., Alonso-Garcia, P.E., Fuentes-Fuentes, M.M., Ariza, L.R. (2013). Business social networks and academics' entrepreneurial intentions. *Industrial Management & Data Systems*, 114(2), 82-93.
- Fonseca, R., Lopez-Garcia, P., & Pissarides, C.A., (2001). Entrepreneurship, start-up costs and employment. *European Economic Review*, 45(4/6), 692-705.
- George, G. (2014). Rethinking management scholarship. *Academy of Management Journal*, 57(1), 1-6.
- George, G., Haas, M.R., & Pentland, A. (2014). Big data and management. *Academy of Management*, 57(2), 321-326.
- Gimmon, E. (2014). Mentoring as a practical training in higher education of entrepreneurship. *Education and Training*, 56(8/9), 814-825.
- Howard-Grenville, J., Buckle, S.J., Hoskins, B.J., & George, G. (2014). Climate change and management. *Academy of Management Journal*, 57(3), 615-623.
- Isabelle, D.A. (2013). Key factors affecting a technology entrepreneur's choice of incubator or accelerator. *Technology Innovation Management Journal*, 57(3), 615-623.
- Ivanová, E. (2017). Barriers to the development of SMEs in the Slovak republic. *Oeconomia Copernicana*, 8(2), 255-272.
- Kljucnikov, A., & Belas, J. (2016). Approaches of Czech entrepreneurs to debt financing and management of credit risk. Equilibrium. *Quarterly Journal of Economics and Economic Policy*, 11(2), 343-365.
- Koch, P.T., Koch, B., Menon, T., & Shenkar, O. (2016). Cultural friction in leadership beliefs and foreign-invested enterprise survival. *Journal of International Business Studies*, 47(4), 453-468.
- Kozubíková, L., Dvorský, J., Cepel, M., & Balcerzak, A.P. (2017). Important characteristics of an entrepreneur in relation to risk taking: Czech Republic case study. *Journal of International Studies*, 10(3), 220-233.
- Krpálek, P., & Krpálová Krelová, K. (2016). Possibilities for developing business potential in economic education. Examples of Implementation in Slovakia and the Czech Republic. *Economics and Sociology*, 9(4), 119-133.
- Liden, R.C., Wayne, S.J., Liao, C., & Meuser, J.D. (2014). Servant leadership and serving culture: Influence on individual and unit performance. *Academy of Management Journal*, 57(5), 1434-1452.
- Marlow, S., & McAdam, M. (2015). Incubation or induction? Gendered identity work in the context of technology business incubation. *Entrepreneurship Theory and Practice*, 39(4), 791-816.
- Michaelson, C. (2015). How reading novels can help management scholars cultivate ambiculturalism. *Academy of Management Review*, 40(1), 147-149.

- O'Leary, S. (2015). The role of enterprise and entrepreneurship within higher education and effective economic governance across central and eastern Europe. *Economics and Sociology*, 8(2), 143-153.
- Ratinho, T., & Henriques, E. (2010). The role of science parks and business incubators in converging countries: Evidence from Portugal. *Technovation*, 30, 278-290.
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning & Education*, 14(2), 187-204.
- Roseira, C., Ramos, C., Maia, F., & Henneberg (2014). *Understanding Incubator Value-A Network Approach to University Incubators*. University of Porto, Faculty of Economics of Porto.
- Siemieniuk, Ł. (2016). Academic Business Incubators as an institutional form of academic entrepreneurship development in Poland. *Oeconomia Copernicana*, 7(1), 143-159.
- Tvaronavičienė, M., Shishkin, A., Lukáč, P., Illiashenko, N., & Zapototskyi, S. (2017). Sustainable economic growth and development of educational systems. *Journal of International Studies*, 10(3), 285-292.
- Yu, J., & Nijkamp, P. (2009). Methodological challenges and institutional barriers in the use of experimental method for the evaluation of business incubators: Lessons from the US, EU and China. *Paper Presented at the Atlanta Conference on Science and Innovation Policy*.
- Zygmunt, J. (2018). Entrepreneurial activity drivers in the transition economies. Evidence from the Visegrad countries. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(1), 89-103.