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## CHARACTERISTICS OF BUSINESS INCUBATORS

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**Abstract:** The paper presents general characteristics of entrepreneurial infrastructure - business incubators. One of the modern ways of support to small newly established enterprises and entrepreneurs, which are in a development life phase, is the system of technological infrastructure: entrepreneurial incubators, technology centres, science parks and business zones. Those are different organizations which help entrepreneurs to develop their business ideas and to overcome more easily the initial problems in business, for which, in a wider context, the term business incubators is used, and also the clusters related to entrepreneurs who are in an advanced phase of entrepreneurship. An incubator is extremely suitable for newly founded small enterprises, which do not have their own business premises, sufficient funds and experience, on one hand, but, on the other hand, they have entrepreneurial ideas, goals and determination to do business. The opportunity to give local and regional support to newly founded and small enterprises by means of business incubators in Bosnia and Herzegovina is significant because it delivers the key elements for the development of incubators, such as unused spaces in all municipalities, that can be easily transformed into a workspace and adapt to the needs of new entrepreneurs.

**Keywords:** SMEs, Entrepreneurial infrastructure, Business Incubators, Entrepreneurship

### INTRODUCTION

The support to the development of small and medium-sized enterprises in the Republic of Srpska had gained in importance in 2002, with the adoption of the Program of Small Business Development, and after that the Law on Stimulating the Development of Small and Medium-sized Companies was adopted. The adopting of the Law has created the basis for legislative, institutional and financial help to this area. On the basis of the Law, during 2004, there were formed: Department for SMEs and Production Craftsmanship at the Ministry of Economy, Energy and Development of the Republic of Srpska and the Republic Agency for the Development of Small and Medium-sized Enterprises. At the same time, on a local level, local agencies for the development of SMEs were being established. The support to the development of SMEs at a local level is also given by municipal development departments which, together with the above mentioned institutions, make support network for the development of SMEs.

Infrastructure is important for entrepreneurial activities [6] and may have different forms and functions. As first, the development of trade and industrial growth require physical infrastructure, road and railway traffic and transportation etc.

In all developed Western countries and in many developing countries, entrepreneurship and small enterprises as a whole are supported by the state, state institutions and nongovernmental organizations in many ways [7]. Such an orientation of a market-developed countries has deep roots, regarding the fact that the capitalism has tried many development models as opposed to one-dimensional models of economic flows control which have been practiced

more-less for decades in the countries of socialist and similar socio-economic systems.

Similarly to the leading countries of the West, many small countries which started with the implementation of market-capitalistic principles in the development of economy three to five decades ago, have reached an enviable level of development today[7] exactly due to the development of small enterprises.

The determinations of Bosnia and Herzegovina [2] related to the SMEs development sector rely on the recommendations of the European Charter and the Act on Small Business. The Law on Ministries and Other Control Bodies of Bosnia and Herzegovina has also defined the institutional framework in the field of issues in the sector of SMEs whose difficulties reflect, above all, in: approaches in defining policies, development strategies and goals in the sector of SMEs, competences, way of work a harmonized monitoring of the results in this area, mutual cooperation and profitability and excessive administration.

At the level of the Republic of Srpska, within the Ministry of Economy, Energy and Development, there is a department for small and medium-sized enterprises, the head of which is an assistant minister with the responsibilities in the work fields: development of entrepreneurship and craftsmanship, making of medium-term and long-term development plans and making of the development strategies of SMEs and entrepreneurial activity.

Pursuant to the (Law on Enterprises of the RS 2006), an enterprise is a legal person which performs the activity to gain profit, and an entrepreneur is a physical person who performs the activity to get profit and the activity of free profession, while an individual

agriculturist is not an entrepreneur. The Law does not know the notion of small and medium-sized enterprise, and because of that the same provisions apply to them as to the other enterprises.

The new (Law on Business Companies 2008) is a modern regulation, greatly harmonizes with the directives of the European Union company law and as such should contribute to the creation of a legal framework complementary the internal market of the EU.

The Law on Business Companies of the Republic of Srpska is based on the best solutions of modern national law of the surrounding countries, and also of some countries from Europe and the USA (Illinois), the Statute of the European Company from 2001, OECD Principles of Corporate Governance from 1998 etc. Entrepreneurship, in the sense of the (Law on Development of SMEs of the RS, 2013), is an innovative process of creation and development of business ventures or activities and of creation of business success at market. Entrepreneurial infrastructure presents spatial-technical forms for toe support of entrepreneurship development, with a special emphasis on establishing and development of SMEs.

In recent time [5], there is a greater emphasis in the commercialization of university research, especially through the creation of spin-off enterprises. They emphasize inhomogeneity of the concept of university spin-off enterprises and point out their heterogeneous properties.

The suggestions of [5] for the classification of university spin-off enterprises are: independent spin-off enterprises, connected spin-off enterprises, with joint investment and as organizational units of universities. Three key approaches are used for differentiating the types of university spin-off enterprises: researchers as entrepreneurs of spin-off enterprises, by the nature of knowledge transfer and the participation of external partners in a new company. These different criteria make the phenomena contained by the concept of university spin-off enterprises.

#### **CHARACTERISTICS OF BUSINESS INCUBATORS**

In the practice of small business development, the incubator model deserves special attention. It seems to be a practical approach in the countries of traditional support for the development of small business, and it seems that its perspectives also exist in the transition countries. Business incubators present, as stated by [1], a contemporary tool for entrepreneurship development in Europe and the USA, and they appear as a response to the recession era and the failure of industrial systems.

Most business incubators [1] use the existing abandoned infrastructure and brown-field investments for their development. Actually,

wherever the surpluses in capacity (empty halls, warehouses, agricultural objects etc.) occur, due to privatization or other reasons, it is possible to use them to develop incubator types of small business. It is, basically, a flexible method for new business development and support for economic development on a confined, local space. Incubators enable many small enterprises to start their work under the same roof with a favorable lease of a functionally prepared space, joint use of infrastructure, services, and specialized types of equipment. Also, they offer equal opportunities for using certain financial, technical and marketing programs. Incubators, located under one roof, enable multiple combinations of business cooperation among the owners of small enterprises, and, on the basis of that, an efficient use of their available resources in a narrow space.

A business incubator (The Law on Development of SMEs 2013) is a form of entrepreneurial infrastructure whose basic activity is to offer services by putting at the disposal, with or without charge, a business premise, consulting, administrative, technical and other services to newly founded businesses, not older than 5 years. Among the participants in the creation of incubators [4] may be: social communities; sponsors (associates); donors (contributors); firms as members or subtenants of incubators; and a service organization to perform common tasks for incubator participants. The social community (state, municipality) assists in creating the basic infrastructural conditions, especially regarding the provision of a location and respective capacity for incubators, but also in the creation of a local economic basis for the development of entrepreneurship under the roof of incubators. They also create some wider opportunities for gathering modest private capital to their partnership association for the purpose of establishing enterprises.

Starting from this, a very significant question arises: what types of enterprises can or should be potential members or subtenants of incubators? That, above all, depends on a determination of what an incubator should contain, for example, only production activity, crafts-service activity, trading activity or, maybe, the competitive freedom among some of them. What should be especially be taken into account is of how and where to find the locations and buildings for such ventures [4]. With that aim, abandoned smaller factories or particular production facilities should be discussed, as well as abandoned or unused schools, warehouses, storehouses, business premises, communal houses, buildings which were once used by the military etc. The locations of such buildings can be acceptable if they are near established business centers, in the suburbs of big cities, in small cities, bigger industrial and village settlements, tourist locations etc. As appropriate locations and buildings

which can be used and revitalized, the ones that are damaged or destroyed to a certain degree can be used as well, if not too large are the financial resources necessary for their revitalization.

In the end, there is no unified concept [7] for, model of or means to develop incubators. There are broad possibilities to establish the contents of work, to design innovative solutions for or opportunities related to urban, suburban or rural position of incubators and the like, and, due to that, the opportunities for specific and untypical types of the business complex. In smaller places, incubators can even be the centers of integrated development of business and employment, and, because of that, every particular case can have individual specifics.

The development of incubators as the instruments of economic policy [2] is especially supported by developed countries, while this cannot be said for countries in transition. The contribution of incubators is reflected by the fact that, when their work well, they significantly decrease the number of enterprise collapses, and they enables enterprises to create new job positions and diversification of production, so that they significantly contribute to the development of the small-business milieu and to local and regional development.

The conveniences and advantages of enterprises that operate in incubators are: use of knowledge and experience of expert and management team of the incubator, as well as the access to knowledge by means of linking into networks on a wider territory; mutual connection of entrepreneurs and opportunities for experience exchange; possibility of additional training and enabling through various programs organized by the incubator; possibility of easier access to financial and investment types of assistance; technical services of incubators; and positive climate and working environment that contribute to inventiveness and innovation of entrepreneurs [2]. Incubator managers and management [4] are among the most important factors for the future success of an incubator because success depends on their ability to manage to connect on the basis of shared interests with the parties seeking work and the success of the incubator (local government, business associations, enterprises), and, through that, contribute to the position and status of the incubator, realizing a quick development of their members, i.e. the enterprises.

Business incubators usually consist of a great number of small business units (usually 10–50 enterprises) [7]. There are usually enterprises with these traits: located in one place, mostly within one building; physically separated by room dividers (it is desirable that there is a possibility of moving the dividers if the enterprises have need to take more space); the building in which the enterprises are located should

have, at least, common rooms for the incubator manager, business-consulting services, joint meetings, a refreshment room where the participants can spend time together informally. Also, the facility must be equipped with adequate infrastructure: electricity, water, loading and unloading platforms, a sufficient number of telephone lines, parking space etc. The spaces are offered to entrepreneurs under flexible conditions, with low rents, and simple and favorable lease agreements. The incubator is equipped with integral services for offering business-support services to entrepreneurs on the spot, at low prices or for free. The mentioned services are specially related to training programs through which entrepreneurs can improve their knowledge and skills in specific business areas. There are also the services of business consultants, in the form of advice, business connecting and also the connecting of entrepreneurs with organizations that can provide the capital for the start-up and development of a business.

For the essential nature of the operation and significance of an incubator, the most appropriate definition[2] states that an incubator is an enterprise that operates for various purposes, in various ways, and it helps through various different forms the founding of new enterprises and their development into profitable independent enterprises.

One of the approaches for classification of incubators incorporates the criteria and aims of their founders (i.e. owners), with possible cases [2]:

- incubator is founded as an enterprise that leases the business premises and makes profit, which is the criterion of the ownership approach,
- incubator is founded as an enterprise which, besides inexpensive business premises, supplies professional advice and helps the development of entrepreneurship, thus manifesting the social goal of supporting the development of small and medium-sized enterprises. This type of incubator must also be financially supported, usually during the first 5 years of its existence.

The actual practice [2] shows a larger number of entrepreneurial incubators, such as:

- Traditional or classical business incubators that offer their clients an arranged workspace and expert business advice on the spot.
- Administered organized premises are “naked” business incubators that offer to small enterprises, their tenants, only organized workspaces at affordable prices, not giving business advice. It is assumed that the enterprises have already survived the initial period and that they have already developed. This type of incubator enables renting, but

pursuant to market prices, both of bigger premises and of consulting and technical services. Such an approach characterizes the US conception of an entrepreneurial incubator.

- Incubators without walls are organizations that do not offer business premises, but only the organized business-support services.
- Incubators of the new economy are highly specialized in the fields of quick-growing sectors, such as high technology and the Internet. The advantage to the founders is the expected benefit from the quick growth of the value of enterprises in which the owners have their share.

Between the traditional business incubators and the business incubators of the new economy, a great number of different organizations can be placed, dealing more or less with providing support for the development of innovations and entrepreneurship, such as: business and innovation centres (BIC), technology centres, knowledge centres, technology-transfer centres, technology parks, science-technology parks etc.

A traditional or classical business incubator provides the business premises under favourable conditions (with accompanying office, secretary and similar technical services) and also provides business services (training and business advice), which comprises the framework of the concept of so-called traditional or classical business incubators. This type of incubator, usually, usually functions to enhance regional and local economic development (through the development of entrepreneurship and creation of new enterprises) and in the creation of new jobs.

The most important characteristic of the concept and success of this type of incubator is the fact that they offer quality services and business advice individually to every small enterprise. Without this, such business premises would be administered organized workspaces—only similar to incubators. Their emphasis on socioeconomic functions conditions their character, being non-profit almost as a rule, and it means that national and local authorities and the public sector must have a significant role in their founding and operations. Classical business incubators sometimes more emphasise social components, because it is not rare that they are used as the supporting instrument for the development of entrepreneurship of certain social groups, such as women, returnee immigrants, refugees or national minorities.

The Business Innovation Centre (BIC) is the dominant model of business incubator in the European Union. BICs differ from the US incubator model [7] primarily because of the fact that they give greater significance to consulting and developing entrepreneurs'

professional skills, being less targeted at providing premises at lower rents. They are, actually, an improved model of the US business incubator. Thanks to BICs in certain areas, from different sources, by means of various projects and advice to entrepreneurs, local growth and development of services necessary for a success of small and medium-sized enterprises is realised and supported. The concept of business incubators in Europe started to be built in the 1980 s on the basis of the US model, with the aim of alleviating the consequences of breakdown of the large business systems and overcoming the problem of unemployment. It can be said that it demonstrated its justifiability. In the territory of Europe [2], the most famous institution for help and promotion of BICs operates successfully—namely, the EBN (European Business and Innovation Centre Network) which gathers more than 180 BICs. In the realization of its mission, the EBN supports local sources and the development of abilities, securing the unified activity of target groups in the territories similar to regions so that BICs, in their operations, work pursuant to certain standards of the EU. The incubator personnel, both permanently employed and temporarily engaged (Talent Pool), basically provide their clients with twelve main services shown in the following overview[2]: selection of entrepreneurial ideas; selection of entrepreneurial projects; evaluation of entrepreneurial ideas; evaluation of entrepreneurial projects; training and preparation of entrepreneurs; technical services; marketing consulting; preparation of business plans; rental of space; acquisition of space; rental of services; and entrepreneurial advice.

Technological centres offer a highly suitable form of entrepreneurial infrastructure, in which technologically demanding programs are realized on the basis of consulting and a mediatory role. The centres have incubator-like characteristics because they enable the numerous services and cooperative relationships for enterprises. In a technology centre, there are opportunities for: association of entrepreneurs on the basis of interest in various projects and groups; business of a larger number of enterprises in one place with business infrastructure provided; connections to other consulting institutions and networks; access to the bases of patents; and assistance to entrepreneurs on the formalities for obtaining credit or risk capital. Technological centres usually have their own laboratories and special measurement, testing and control equipment. When they reach a certain mass and level of their own equipment, they can easily transform into a technology park.

A knowledge centre is an organization established with the aim of enhancing research in a certain area. The knowledge centres are usually established by

public research organizations, faculty institutes and business organizations. They are usually organized as organizational units. A technology-transfer centre is a research-development unit organised as a business association. A technology park unifies, in its structure, the work of technology centres and affirmed medium-sized and big enterprises. There is an emphasis on technology transfer and the cooperation of scientific and research institutions with enterprises.

Technology parks enable the renting of larger areas at market prices for prototype production, and it does not impose time limits on enterprises regarding the use of the space. A technology park (The Law on Development of SMEs 2013) is a form of entrepreneurial infrastructure that, within a defined space and with adequate equipment, performs the connection of scientific and research institutions with business subjects for the purpose of technology transfer, application of innovations and development of the economic area in which it is placed.

In the countries in transition[2], due to underdevelopment and the small number of incubators, technology parks work partially as incubators, because the state supervises the space and services, so that the length of stay in a park are limited and only a few enterprises can be accommodated. Technology parks have a significant role in the development of the region because, pursuant to the EU criteria, they are placed in an area where about 300,000 people live, having one or two universities and a few supranational associations [2].

Technology parks are, through joint investments, founded by a country, regions, cities, major enterprises, faculties, banks etc., investing non-refundable assets in the form of land, buildings and money. The members of the management board of a technology park are the most prominent businessmen, representatives of local institutions and representatives of founders and are the basis of further connecting interested parties and securing assistance for the incubator. A technology-park manager is a key person for success, since he/she must be an expert in many business fields and capable of leading a team.

A science park is an institution in which scientifically-oriented people, e.g. researchers, professors, financial experts, consultants and businessmen, are concentrated. At the same time, it is the place that connects science and economy. The basis of the activity of science parks is the application of achievements and innovations in the field of engineering and technology on a commercial basis, and support for the founding and development of enterprises based on knowledge. The most common location of a science park is close to a university, and the founders can vary from a country, municipal and local institutions to banks and chambers of commerce.

As stated by [8], universities are the motors of an economy based on knowledge and also the places where knowledge is produced and exploited. They further address the improvement of the concept of entrepreneurial infrastructure as the analytical framework for understanding the organization dynamics of a modern university and insurance of entrepreneurial evolution within higher education. Some research [9] gives useful insights into the planning and performance of technology-transfer activities.

Research shows that the degree of industrial R&D, the quality of faculty and venture capital are significant indicators of the technology-transfer effect. They put the accent on universities as motors of economic development and on increasing their engagement in technology transfer in the field of entrepreneurship. Some research [3] has paid special attention to the characteristics of academic “spin-off policies”, where technology transfer and entrepreneurial infrastructure were weak outside high-tech clusters, indicating a significant influence of academic institutions on the potential growth of spin-off policies.

#### CONCLUSION

Every local community or a set of local communities which are connected geographically, to attract a larger number of enterprises to their territory, the territory of the Region, takes various activities to improve the conditions of work of SMEs. Local community plays a very significant role, while the task of the country, or the government, is to activate the inner resources, as additional development impulses. A prudent activity of local communities with the aim of developing own infrastructure and entrepreneurial potential and attracting of investments can be a concept of regional development.

Local community must develop an attractive environment for capital and enterprises. The establishment of business incubators accelerates and simplifies the placement of spatial resources in the function of economic development, investments, growth and employment. Everywhere in the world, business zones present a significant instrument for the stimulation and development of entrepreneurship and general economic growth of a certain area. They are established on the basis of a clearly expressed interest between the businessman and bodies of local and regional government, with the support of higher levels of government and research-educational organizations, universities and institutes.

#### Note:

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#### References

- [1] Bošnjak S., Business incubators as generators of entrepreneurship development. Practical Management. J Theory Appl Manag 2(2):51–56, 2011.
- [2] Cvijić M., Istraživanje uslova i mogućnosti za razvoj preduzetništva u procesu tranzicije. doktorska disertacija. Novi Sad, 2007.
- [3] Degroof JJ, Roberts BE., Overcoming weak entrepreneurial infrastructures for academic spin-off ventures, 2004.
- [4] Dostić M., Managing small businesses, Sarajevo 2001.
- [5] Garmendia B.M., Castellanos R.A., Types of spin-offs in a university context: a classification proposal. Cuadernos de Gestión Vol. 12 - N.º 1. pp. 39-57 ISSN: 1131 – 6837, 2012.
- [6] Heger D., et al., The Effect of Broadband Infrastructure on Entrepreneurial Activities: The Case of Germany. Centre for European Economic Research (ZEW). 2011.
- [7] Medaković V., Research of conditions for development of small and micro enterprises and development of entrepreneurial infrastructure model. Doctoral thesis. Faculty of Mechanical Engineering. East Sarajevo, 2012,
- [8] Nelles J, Vorley T., Constructing an entrepreneurial architecture: an emergent framework for studying the contemporary university beyond the entrepreneurial turn, 2010.
- [9] Powersa BJ, McDougall PP., University start-up formation and technology licensing with firms that go public: a resource-based view of academic entrepreneurship, 2005.



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