

Categories and General Characteristics of Entrepreneurial Infrastructure

Vlado Medaković and Srđan Vasković

Abstract The paper presents the general characteristics of entrepreneurial infrastructure. One of the modern ways to support small newly established enterprises, which are in a developmental life phase, and entrepreneurs is the system of technological infrastructure comprising: entrepreneurial incubators, technology centres, science parks and business zones. Those are the different organizations that 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. Incubators can function independently or they can be, for example, a part of a science park. In this paper, we present in the tables existing organizational forms of business infrastructure (clusters and entrepreneurs—business centers: free zones, industrial and business zones, science and technology parks, business incubators), their activities, and numerical strength in the territory of the Republic of Srpska.

Keywords Entrepreneurial infrastructure • Business zones • Incubators • Cluster • Entrepreneurship

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1 Introduction

Infrastructure is important for entrepreneurial activities (Heger et al. 2011) and may have various forms and functions. As first, the development of trade and industrial growth require physical infrastructure, road and railway traffic and transportation etc.

After the World War II when the state had nationalized private property (Medaković 2012), the spirit of entrepreneurship in the territory of former SFR Yugoslavia, including B&H as well, was cut off at the roots. The economic philosophy of the new economic system was based on the criticism of all the aspects of capitalism, such as individualism, private ownership over the means of production, entrepreneurship in a wider sense etc. Entrepreneurship was identified with private ownership. In the beginning (Cvijić 2007), that had meant small business. However, with further breakthroughs and the propagation of small business, the term private entrepreneurship occurred, which, as such, was accepted in official frameworks. Specifically, in the economic structure of the SFR Yugoslavia, especially after 1976, once The Law on Associated Labour had been adopted, a significant number of labour organisations (enterprises) emerged, of a combined type, in the fields of mining, metallurgy, metal processing industry, military industry and the wood-processing industry, with a great number of basic organizations of associated labour and complex organizations of associated labour, which had disregard of market laws as a common feature. Such enterprises, being labour-intensive, were oriented to the employment of a great number of people. The society propagated the need of full employment. There was a general sense of security, especially once a state job had been obtained. No one thought about any significant individual engagement in the area of entrepreneurship.

The structure of the individual sector consisted of agriculture, then of independent forms of production, service and construction craftsmanship, and independent catering, independent car-transportation activity and independent trading activity. In the SFR Yugoslavia, the percentage of the employed, as stated by (Cvijić 2007), in small enterprises with 7–100 employees was only 2.4%, and, in enterprises with 1–6 employees, was 5.6%. The number of employees was limited to 10. In the process of building socialism, the private sector was called small business, and it operated under numerous limitations in terms of what it could deal with and with whom and how many employees it could engage.

Such conditions are a phenomenon which is characteristic for all former socialist countries, and which is related to a lack of small- and medium-sized enterprises in the economic structure, and, by means of that, to the absence of creating an entrepreneurial infrastructure.

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 (Medaković 2012).

Such an orientation of the market-developed countries has deep roots, regarding the fact that capitalism has tried many developmental models as opposed to the one-dimensional models of economic flows control that have been practiced more-or-less for decades in the countries of socialist and similar socio-economic systems.

Similar 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 (Medaković 2012)—exactly due to the development of small enterprises.

The determinations of Bosnia and Herzegovina (Cvijić 2007) 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 SMFs, whose difficulties reflect, above all (Cvijić 2007): approaches in defining policies, development strategies and goals in the sector of SMFs; competences; means of developing 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 labor field including: development of entrepreneurship and craftsmanship; making of medium- and long-term development plans; and forming the developmental strategies for 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, an entrepreneur is a physical person who performs the activity to generate a profit and the activity of a free profession, while an individual agriculturist is not an entrepreneur. The Law does not acknowledge the notion of small- and medium-sized enterprises, 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 harmonizing 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 (Rajčević 2009) is based on the best solutions of modern national law of the surrounding countries, and also of some other countries in Europe and the states in the USA (Illinois), the Statute of the European Company from 2001, OECD Principles of Corporate Governance from 1998 etc. The decrease of bureaucratic obstacles by eliminating the actions of administrative procedures for the purpose of meeting spatial requirements, in which the business activity is performed, in terms of technical equipment, and meeting the requirements of conditions of protection and work and environmental protection, are some of the innovations in the Law on Business

Companies. The simplification of procedures for establishing business companies is harmonised with the Framework Law on Registration of Business Entities in Bosnia and Herzegovina and the Law on Registration of Business Entities in the Republic of Srpska, being also harmonised with the EU community law, and should shorten the procedure for establishing a society to a period consistent with the surrounding countries. The legislator rejected, as anachronous, the term enterprise and accepted a modern, more precise and narrower term, accepted in most surrounding countries, which is “business company”, including one of the following types: partnership, limited partnership, limited liability company and joint-stock company.

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 in the market. Entrepreneurial infrastructure presents spatial-technical forms to support entrepreneurship development, with a special emphasis on establishing and developing SMEs.

In recent years, there is a greater emphasis on the commercialisation of university research, especially through the creation of spin-off enterprises (Garmendia and Castellanos 2012). They emphasize the inhomogeneity of the concept of university spin-off enterprises and point out their heterogeneous properties. The suggestions of Garmendia and Castellanos (2012) for the various classifications 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 various criteria comprise the phenomena included in the concept of university spin-off enterprises.

The participation of researchers as entrepreneurs (Garmendia and Castellanos 2012) is an important approach, because the profile of an academic spin-off company exploits the opportunity of being connected with universities. Inclusion (Garmendia and Castellanos 2012) of external partners in a new venture is a sign of the quality of such enterprises, and that implies that a spin-off company has successfully passed the evaluation of professional investors and indicates that the transfer of knowledge in a university is at an exceptional level.

The study (Changa et al. 2016) is based on the entrepreneurial university. The concept of Research Ambidexterity (RA) is developed. They came to the conclusion that the development of RA and entrepreneurial universities should be divided into several levels of university, departments and individuals.

The research results (Landry et al. 2010) indicate the existence of three types of knowledge transfer. The first portfolio is made up of complementary activities that are mutually dependent. Another portfolio includes teaching activities and publications that can replace teaching activities. The third portfolio consists of educational activities and other activities independent of teaching activities, i.e. patents, spin-offs, consulting and informal knowledge transfer.

2 Business Zones as Entrepreneurial Infrastructure

Formation and development of business zones is a long-term, planned activity directed to stimulate economic development and employment in the territory of a local community, with the use of adequately equipped facilities and other instruments of support, which enable a more efficient and faster economic and spatial development of enterprises that operate in a zone.

Business zones (The Law on Development of SMEs of the RS 2013) are a form of entrepreneurial infrastructure that offer a structurally arranged and communally equipped space, intended for a harmonised and planned use by a large number of enterprises and entrepreneurs, where the planned and harmonised approach enables a joint use of the space, as well as of communal, administrative, financial, technical and other services—thus realising lower costs of business.

The terms entrepreneurial infrastructure and business infrastructure often have multiple meanings because the development terminology mostly has not been fixed due to its complexity, by legislation and the fact that those are relatively new development mechanisms.

The notion of business zone can define the widest notion of zones in general, which presents a certain area of an infrastructurally equipped building lots that are regulated by spatial-planning documentation, intended for business, i.e. the creation of added value.

Pursuant to the first classification (Medaković 2012), the zones can be classified into four groups:

1. Specialized zones—incubators, technology centres, technology parks, centres for transfer of technologies and zones specialized for certain activities;
2. Industrial zones—areas with a great concentration of industry, predominated by big enterprises;
3. Entrepreneurial—craft zones—areas with a great concentration of small enterprises and entrepreneurs;
4. Agricultural zones—zones founded on soil which is not intended for buildings but is used for agricultural production.

Pursuant to another classification (Medaković 2012), business zones can be classified into the following four categories:

1. Industrial zones are larger zones mostly oriented towards bigger industrial enterprises from similar agricultural sectors, but also the small and medium-sized enterprises (SMEs) related to the mechanism of subcontracting with bigger enterprises. A special category of industrial zones is so-called industrial parks, whose speciality is to have a company as the operator which manages the zone on behalf of one or more owners. In developed countries, the operator can be a public property (public communal enterprises and/or municipality and state), a public-private partnership or privately owned concern. The aim of creating this form is a more efficient management of the zone and better planned development.

2. Entrepreneurial zones are smaller zones primarily intended for SMEs and entrepreneurs, which have a more favourable support treatment with the aim of faster development, i.e. to invest more in equipment, human resources and working assets, and less in the business premises.
3. Business centres are business zones where business, trading and logistical centres oriented to service activities are most often grouped. The building of business centres is most frequently a private or public-private initiative.
4. Technology parks are the zones directed to high technologies and usually emerge near universities (with technical faculties and institutes). Located in technology parks are usually micro-, small- and medium-sized enterprises based on high technologies, the application of new knowledge and introduction of new practices into the economy.

Besides the named classifications (Medaković et al. 2016a, b), on the basis of strategic importance, industrial zones could be divided into zones of strategic interest that are defined pursuant to various criteria, as projects of special interests, and emerge by an initiative of the government towards the realization bearers, which can be of various levels and legal statuses (from top to bottom) and local zones of municipal or regional importance and oriented towards smaller industrial capacities. Their size is 10–60 ha, depending on the needs and possibilities of the organizer. The initiatives for the development of such zones originate from one or more municipalities (initiatives from bottom to top).

Business zones present special organised business units in which, at one location, well connected with communications, the types of production and service activity based on the principles of cluster organization are developed, with the use of developed infrastructure and accompanying services that reflect their specific industrial characteristics.

Basically, business zones secure the competitiveness for businesses in two ways (Cvijić 2007; Medaković 2012):

The first is related to the possibility of using the effects of integration of similar and related businesses within a zone, resulting in the making of competitive advantages for downstream activities within the zone by means of: access to various sources of raw materials, components, packaging and services; lower transaction costs, because the locations of providers and producers are identical; efficient coordination based on availability and constant exchange of information among the buyers and suppliers in the zone; improvement of innovation processes on the basis of good knowledge of the consumers' needs and of joint work in solving problems; specialisation and efficiency increasing and the application of new technologies in a strategic partnership of enterprises in the zone; firmer integration of providers and related industries in the chains of value of enterprises in the zone, especially in cases when downstream activities are oriented towards international markers; and partnership with related industries in cases when they can service a few enterprises, for example, when distributive enterprises in the zone can distribute the products of a few producers.

The second aspect is related to efficiency offered by the location of the zone for its members by means of: decrease of investment costs for production and business objects; decrease of operational costs of functioning, transportation, maintenance and safety of an object, and the services organized in the zone; and joint use of certain objects (laboratory, copy-room, energy sources etc.).

Business zones appear under various names. Other terms also in use are: industrial park, economic zone, business zone, industrial possession, business zone, artisanal zone, eco-industrial park and some others, but basically they denote what has been subsumed under the notion of a business zone. Regardless of what we name them (Medaković 2012), all of them have two characteristics in common: common location of enterprises oriented to mutual business cooperation and a common managerial structure. They vary one from the other in the sense of type and size. They are most often divided due to the type of investment, i.e. the preparedness for investment, to the green field and brown fields. In the first case, green field, we talk about the creation of business zones at completely new locations, while in the second case, a brown field zone has been created from already used ground and objects in industrial centres. From the viewpoint of Bosnia and Herzegovina, especially significant is the use, or reactivation, of infrastructural capacities of former state enterprises, whose value rapidly evaporates by lack of use. In cases when the reconstruction of existing capacities is more expensive than the construction of new ones, the priority is the first option.

Business zones have certain specificities in relation to free zones, which are, in many countries, one of the instruments for conducting trading policies. Moreover, free zones are specially denoted and arranged areas in one state, where business activities take place under special conditions, mostly with certain benefits related to elimination of duties and taxes for activities directed towards export markets. So, free zones are basically the means of export promotion and of promotion of direct foreign investments in some countries. Besides the stated differences, business zones and free zones also have some similarities, in the sense that both forms of organization are directed towards the building of competitiveness by means of creating a competitive advantages via a certain location of production. Moreover, the free zones in industrially developed countries have lost significantly in their primary meaning of economic oases based on the advantages of a duty-free area and the avoidance of taxation, and they gain importance in creating competitive advantages from the fundamentals of a quality infrastructure of a free zone, high technologies applied in the zone, advantages of specialization, innovations and low transactional costs and other advantages created by the business zones.

The basic differences and similarities of business and free zones (Medaković 2012) are shown in Fig. 1. The similarities are shown in the intersection of squares and differences in each of the squares which present particular forms of zones.

Business zones should be considered as one of the instruments for the realization of new industrial policies that promote many important economic goals. Among the goals, the following ones stand out: restructuring of production; growth of employment; increasing productivity and efficiency in the economy; improvement of the technological level of production and business in general; improvement of

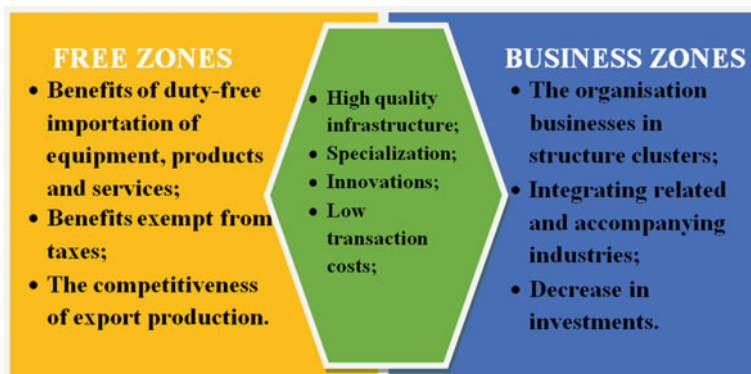


Fig. 1 Similarities of and differences between free and business zones

export and export competitiveness; and development of small and medium-sized enterprises (SMEs).

Establishing competitiveness in a small country, especially in conditions of responsibility for regional and local development, is related to the growing role of small and medium-sized enterprises. Specificity of development based on the promotion of SMEs is related primarily to the need of creating a business environment in which the enterprises will enjoy the conditions for building sustainable competitive advantages. In many elements, the business environment of SMEs exhibits specificities. The enterprises do not have the strength to act independently in big markets because of their fragmentation, so it is logical that, in the business environment, they start to build partnerships and develop cooperation in horizontal and vertical dimensions to promote the cluster-type cooperation.

Namely, what cannot be secured as a desirable business environment in the economy in general, is often achieved within business zones, so that they become attractive for the location of production which means entering into an enhanced phase of competitiveness or means greater efficiency within the arena of competitiveness which marks an economy and guided by factors of development.

Some of the goals (Medaković 2012) for founding business zones can be the following ones: securing long-term conditions for the development of small and medium-sized entrepreneurship and production craftsmanship; long-term decrease and alleviation of the trend of unemployment and support for entrepreneurs to create new job positions, especially within the production activities; stimulation of growth and development of entrepreneurs, especially in terms of development of new products; application of new technologies and support for exports; facilitating communication and support of cooperation among the entrepreneurs within a zone, especially the support for association in realization of concrete entrepreneurial and development projects; and creation of conditions for a transfer of a part of production activities from a cramped town centre to use that space for more suitable and profitable goods.

Economic development (Medaković 2012) of an area is greatly determined by available potentials, i.e. resources, on one hand, and certain factors, i.e. the measures which create a favourable ambient and support to development, on the other hand. Available resources for economic development of a region—contained in: infrastructural capacities (roads, railway); natural potentials; power sources; installed economic capacities; personnel; and geographic location—present a relatively solid basis for the future planned development of the region.

3 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 Bošnjak (2011), 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 (Bošnjak 2011) 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 privatisation 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 favourable 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 (Dostić 2001) 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.

State institutions (Dostić 2001), for example, a municipality or any other institution, if they possess a space with potential for an incubator system, may donate it to the members of the incubator, under the condition that the businesses of importance for local economy and households are developed under its roof. Such a space can also be conceded under conditions of a favourable lease, so that the incubator subtenants could initially have favourable conditions to nurture and develop their work. Members of the incubator, or “tenants”, as they are sometimes called in America, participate with immediate environment and internal contents of the incubator in order to exploit mutual contacts and businesses with less risk and more business security. The aim of this approach is to provide the numerous benefits offered by the incubator on the basis of a consolidated organization of work, programs and modern solutions, joint equipment, quick project feasibility, the advantage of joint maintenance of buildings etc.

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 (Dostić 2001). 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 centres, 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 revitalised, 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 revitalisation.

The rules that have to be established to enter into the incubator of potential business start-ups can be prescribed by law or defined by the main sponsors and initiators of its establishment. Uncontrolled entry by potential incubator occupants into this system would lead to errors, either of a technical or of a marketing nature, and to quick business failure of such enterprises. Also, the potential members of an incubator should get familiar with the detailed concept of its functioning, especially regarding the centralized services, administration and use of common space. Those who do not accept such a concept cannot be the members of the incubator. Entrepreneurs, as candidates for the incubator, should be introduced to all possible mistakes, especially those that would likely be fatal for business results.

In the end, there is no unified concept (Medaković 2012) 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 centres of integrated development of business and employment, and, because of that, every particular case can have individual specifics.

Entrepreneurial incubators gather, in one place, most of the services (Cvijić 2007) that are necessary to an entrepreneur for a faster, successful development of an enterprise. The services are specially related to: offering the services of using business premises, consulting services, the development of human abilities, connections of chamber and institutions and financial services.

The development of incubators as the instruments of economic policy (Cvijić 2007) 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 (Cvijić 2007).

Incubator managers and management (Dostić 2001) 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. For an incubator to be long-term sustainable, it is necessary that the management possesses the ability to create and maintain a positive business environment and business culture, as well as the ability to provide assistance in the fields of marketing and business planning.

Business incubators usually consist of a great number of small business units (usually 10–50 enterprises) (Medaković 2012). 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 favourable 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 (Cvijić 2007) 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 (Cvijić 2007):

- 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 (Cvijić 2007) 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 socio-economic 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 (Medaković 2012) 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 (Cvijić 2007), 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 (Cvijić 2007): 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 (Cvijić 2007), 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 (Cvijić 2007). 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 Nelles and Vorley (2010), 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 (Powersa and McDougall 2005) 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 (Degroof and Roberts 2004) 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.

4 Clusters as a Model of Entrepreneurial Infrastructure

A cluster is a network organization or a group of enterprises coordinated by market mechanisms (Medaković et al. 2016a, b) rather than by chains of commands. A cluster consists of enterprises that are mutually connected, vertically (buyer–supplier) or horizontally (same buyers, technologies, distribution etc.). Competitive branches are grouped into clusters most often.

A cluster (the Law on Development of SMEs) is a form of entrepreneurial infrastructure consisting, in a geographical area, of mutually related business entities that do their business in the same, similar and various activities and, related to them, specializes suppliers, service providers, educational and scientific-research institutions, agencies and other.

In the practice of small-enterprise development, the cluster model deserves special attention. It has proven to be practical, especially in countries that have a tradition of supporting the development of small enterprises. The immediate predecessor to the development of clusters was incubators and, actually, clusters developed quickly in the areas that have had experiences with incubators. The connecting of entrepreneurs, their cooperation, sharing of services and equipment, or their networking into the most common clusters is also, as stated by (Bošnjak 2011), the influence of the work of most incubators. The connecting of business incubators with the academic and research community is also of great significance.

Clusters are presented by Porter (1998) as the basis of the new competitive economy, emphasizing their importance in increasing the competitiveness of

enterprises on local and international markets. He defined them as geographic concentrations of mutually related enterprises, specialised suppliers, service providers, enterprises with similar activities and relevant institutions related to them (universities, agencies for standardisation and vocational associations), which mutually compete in some areas but also earn money. A cluster, as a concentration with critical mass (Porter 1998) and extraordinary competitive success in a certain activity, represents a significant characteristic of every country, regional and local economy, especially in economically developed countries.

In countries in transition, clusters have their real future perspectives. It must be kept in mind that the experiences gained in the development of clusters in the European Union can be transferred to local practice without modifications, which would be unavoidable in an uncontrolled development.

The system of clusters (Jojić and Božić 1998) is a global model for the development of small enterprises. They prosper where the development of small business has already reached a significant level and where systematic measures of the country contribute to it. They assist enterprises to develop quickly, to apply modern methods of work and gain the maximum from their market environment under modern management; at the same time, the regional economy achieves competitive advantages in relation to others. Thus clusters connect technologies, industries and, generally, the economies of two regions or even a few regions from a few countries. It can occur within branches (metal, wood, textile, food etc.) in which SMEs develop by using communications, technologies and foreign investments from other regions.

The aim of clusters is to achieve a competitive advantage. One of the relevant factors promoting competitiveness is also the geographic concentration. Finally, besides the geographic (local) factors, legislation, organization and development of financial market have great significance for the development of clusters. The use of knowledge (Medaković 2012) about sound strategies for the development of clusters in the world and on the overall results from their realization contributes so that, in all new cases (either specific or not), good solutions for their creation and development are established.

However, besides the similarities, there are also differences in the development of clusters. They mostly occur due to different degrees of development of regions, levels of governmental inclusion in this model of small enterprises development, strengths of the industrial basis, critical masses of people with entrepreneurial spirit and the general interest of environment factor carriers in general. In developed countries, local and regional government initiate the development of clusters and have had success in that, because of good knowledge of economic processes and of exactly where they are in control, consistent with finding productive measures of support for the realization of the goals (Medaković 2012). In underdeveloped countries and in small countries, ventures of this type are taken at the national level, especially when it is known that local and regional authorities are not ready to support the development of clusters.

5 Review of Existing Forms of Entrepreneurial Infrastructure in the Republic of Srpska

At the beginning of the 1990s, characterized by the breakdown of the former state, the outbreak of civil war, especially in the territory of B&H (The Republic of Srpska), events stopped not only the development of entrepreneurship but also fundamental economic activities. The support for development of small and medium-sized enterprises in the Republic of Srpska 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 created the basis for legislative, institutional and financial help in this area. On the basis of the law, during 2004, there were formed two key agencies: the 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 for local level, local agencies for the development of SMEs were being established. The support the development of SMEs at the local level is also now given by municipal development departments which, together with the above mentioned institutions, maintain support network for the development of SMEs.

Besides the state institutions, the institutes for small business at universities and colleges have a significant role in the support of the SME sector in the USA (Medaković 2012). In the European Union, state institutions also support the work of SMEs, creating a favourable setting for their business. The development of SMEs in the EU occurs at various levels, although the measures are not harmonised and the same for all members, which implies that a successful practice cannot be copied because of the existence of differences in cultures, economic structures and economic potentials.

Every local community or a set of local communities that are connected geographically engages in various activities to improve the conditions of work for SMEs so as to attract a larger number of enterprises to their territory or their region (Medaković 2012). Local communities plays a very significant role, while the task of the country, or the government, is to activate the internal resources, as additional developmental sparks.

A prudent activity of a local community aiming to develop its own infrastructure and entrepreneurial potential and to attract investments can be to adopt a concept for regional development. Local communities must develop attractive environments for capital and enterprises. The establishment of business zones 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 an area. They are established on the basis of a clearly expressed interest among the businessman and bodies of local

and regional government, with the support of higher levels of government and research-educational organizations, universities and institutes.

Regarding the business incubators, their location is also important, and it is recommended that an incubator serve as an entrepreneurial environment, so it is desirable that they be networked with the university or science sector. Incubators accept (Medaković 2012) primarily firms based on new technologies (hi-tech firms) or production firms based on tested technologies. The emphasis should be put on human factor as the generator of success. Business incubators, as well as business zones, can have a significant, positive impact on the development of the national and local or regional economy.

The entrepreneurial infrastructure (Law on Development of SMEs of the RS (2013)) can be organized in the form of business zones, technology parks, entrepreneurial incubators and clusters. Exceptionally, they can be organized and other forms of infrastructure for the development, promotion and research in this area in accordance with the regulations and requirements of the economy.

Table 1 (IRB RS 2017) provides an overview of the entrepreneurial infrastructure in the Republic of Srpska. This overview contains the forms of organization of entrepreneurial infrastructure clusters and entrepreneurs-business centers: free zones, industrial and business zones, science and technology Parks, and business incubators, as well as their activities and the number of existing forms of entrepreneurship infrastructure.

As regards cooperation with scientific institutions and universities in the Republic of Serbian, there exists several business incubators and one cluster; they are (IRB RS 2017):

1. Business Incubators—Innovation Centre Banja Luka operates as a foundation, which has the following stakeholder's structure: Ministry of Science and Technology of the Republic of Srpska, Atene Prosjekledlse on behalf of Ministry of Foreign Affairs of Government of Norway, City of Banja Luka, University of Banja Luka, University of East Sarajevo and RARS—Republic Agency for the Development of Small and Medium Enterprises. The Innovation Centre Banja Luka contains enterprises: Business Incubator, Training and Conferences.
2. Business incubator NGO “Krajina” Banja Luka, located on an area of ten hectares of land planted with perennial medicinal herbs (seedlings garden formed in partnership with the city). The business incubators are agriculture and forestry activities, and owned by City of Banjaluka. Project leaders: NGO Krajina”—Business Incubator, City of Banjaluka, City of East Sarajevo, RS municipalities, RS Government, RS Institute of Agriculture and Banjaluka and Centre for Rural Development and Improvements. A business incubator has been implementing a programme of organized support for the development of agriculture—production of organic food, fattening of breeding cattle and initiation of small farms (interviews conducted with 1734 households in the city territory, education, advisory groups and establishment of agro-exchange—electronic supply and demand bids for agricultural products).

Table 1 Review of existing forms of entrepreneurship infrastructure in the Republic of Srpska (IRB RS 2017)

Entrepreneurial infrastructure		Activities	Numerical strength
Cluster	Existing clusters	Agriculture and forestry	5
		Processing and products of wood and cork, cellulose paper and paper products	6
		Energy, gas and water production and supply	1
		Food and beverage industry	1
		Other	2
	Planned	Food and beverage industry	1
		Agriculture and forestry, food and beverage industry	1
	Cooperatives	Food and beverage industry	4
		Agriculture and forestry, food and beverage industry	6
Entrepreneurs-business centers	Free zones		3
	Industrial and business zones		96
	Science and technology parks		1
	Business incubators	Agriculture and forestry	1
		Construction, furniture production, production of metal products, excluding machinery, production of rubber and plastic products	1
		Other, processing and products of wood and cork, cellulose paper and paper products, production of leather and leather products	1
		Other	6

3. Business Incubators university business incubator—in creation phase. It will be cited in the municipality East Ilidža.
4. Existing clusters, Solar Energy Cluster, whose is activities Energy, gas and water production and supply. Leader cluster is Faculty of Mechanical Engineering Banja Luka with members “Topling Factory” Prnjavor, “Energomont-Bemind” Banja Luka and “Koming pro” Gradiska.

6 Conclusion

As the result of determination and preparations for membership in the EU, in Bosnia and Herzegovina (The Republic of Srpska), there is currently a process of reforms with the aim to harmonise the existing legal system with the legal system of the EU. The current determinations are to harmonise the legal framework, which is being built with the EU and the Act on Small Business, providing the conditions for the SMEs sector to be at the top of economic development priorities. These regulation will result in healthy legal frameworks for the founding and status of companies, including the fields of taxation, the availability of financial resources and the orderly cessation of the work of a company. The principles valid in the process of reforms are: decentralised organisation and modest administration and making of conditions for providing the possibility of realization of business interests and initiatives of interested parties, i.e. the participants in the SME sector.

It is very important to make efforts in understanding particular notions of different forms of entrepreneurial infrastructure. There are no precise and unified definitions, so the matching is not compulsory among the notions in the various countries.

General characteristics of entrepreneurial infrastructure (business zones, incubators and clusters) are presented, as well as their role and importance in terms of providing conditions for the creation and development of small and medium enterprises.

A review of the literature comes to the conclusion that particular notions are named differently, but, in principle, are the same shape entrepreneurial infrastructure.

The paper presents the existing state of the entrepreneurship infrastructure in the Republic of Srpska, with the numerical strength of individual forms, as well as their activities.

From the point of view of activities and the impact of scientific institutions and universities in the Republic of Srpska and their participation in establishing and supporting the work of the incubator, the results are not satisfactory. We have two incubators that exist, which includes the universities and scientific institutions, as well as a cluster in which participates as a founder the Faculty of Mechanical Engineering Banja Luka. We also have a university business incubator, which is in the process of formation.

On the other hand, traditional, passive teaching on entrepreneurial matters is largely present at the universities. In the future, scientific institutions and universities should be more involved in the establishment of incubators that should enable, through advice, training and consultancy, the business success of future entrepreneurs, as well as their creation of companies that would have a chance to survive in the market.

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