

Incubators in Developing Countries: Development Perspectives

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Abstract: *Business incubators aim to maximize the chances of success of start-up companies by creating a supportive environment. Typically, this involves offering management assistance, mentoring, access to financing, flexible and low-cost leases, office services, etc. There is large number of business incubators in the world. In this paper issues concerned status, development and overview of existing practice in the world will be presented as well as general issues and perspectives for developing countries.*

Keywords: *business incubators, virtual incubators, developing countries*

1. INTRODUCTION

Business incubation is becoming increasingly popular in the industrialised world and in developing countries. Business incubators aim to maximise the chances of success of start-up companies by creating a supportive environment. Typically, this involves offering management assistance, mentoring, access to financing, flexible and low-cost leases, office services, etc. Although incubators are often thought of in terms of a building housing start-up companies, many incubators have gone 'virtual'. Virtual incubators serve client companies that are located off-site.

There are different estimation concerning number of business incubators in the world today. According to Lalkaka R (2007) there are 3,000 world-wide, out of which roughly 1000 are located in North America, 1,000 in Europe and 1,000 in the rest of the world.

There are different incubator models as well as different range and level of services in incubators world wide. According to Montigny de N. (2007) the

main issues in developed countries are:

- Expanding incubator's function,
- Successfully connecting to Venture Capital,
- Optimal path from pre-starting companies towards gazelle creation,
- Increase in clients outside the incubator's walls and
- How to successfully use internationalisation processes for stronger results.

In developing countries beside issues mentioned above there are number of additional problems, issues and obstacle.

In first part of the paper we will present overview and types of business incubators, with brief overview of trends in developed counties. In the second part we will present specific issues and suggestions for developing countries.

2. OVERVIEW AND MODELS OF BUSINESS INCUBATORS

Business incubation is a dynamic process of

business enterprise development. Incubators nurture young firms, helping them to survive and grow during the startup period when they are most vulnerable.

Incubators provide:

- hands-on management assistance
- access to financing
- business and technical support services
- shared office space, access to equipment

Technology incubators nurture hi-tech start-ups and present a technology-oriented variant of business incubators

Business incubators make a significant contribution to job and wealth creation. The business incubation process adds value by accelerating the start-up of new businesses and helping to maximize their growth potential in a way that is more difficult for alternative SME support structures to achieve.

Business incubators usually support new, start up, innovative business, connected with scientific background. According to Gullander S. (2007): general schema of flow from idea to innovative start-up company is depicted on the

figure 1.

The idea is in the very beginning of the process. The innovative or entrepreneurial idea could come from different sources:

- Students (during regular course, or students competitions, workshops etc.),
- Researchers for Universities (scientific research, research competitions, workshops etc.),
- Inventors (societies of inventors, competition for the best innovative idea),
- Business,
- Others (Serial entrepreneurs, risk capital association, business angels).

In the next step idea could transform t project. Project could be supported by University pre-incubator, business incubator or virtual incubator. The next step is development of business plan for commercialization of entrepreneurial or innovative project. Successful business plans could be incubated using support of different external entities (Business, Government, Banks, Venture Capital, Business Angels).

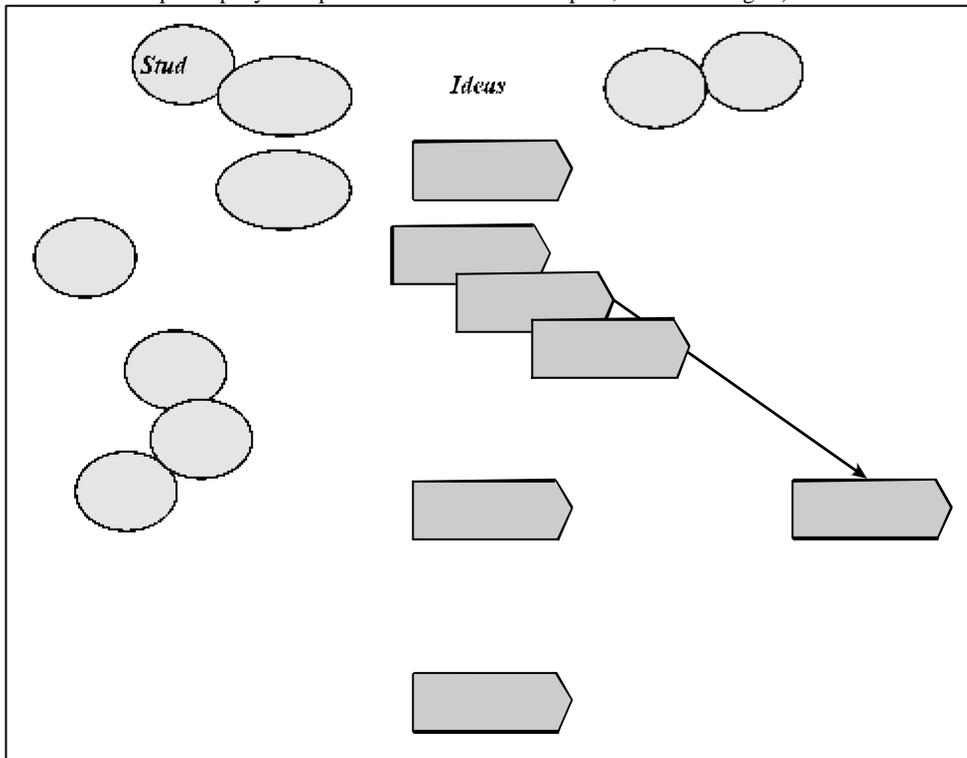


Figure 1 – Innovation system

Generally we could separate different incubator models:

“First Generation” Incubators

This first model of incubators is basically oriented toward infrastructure component (building new facilities, such as science, technology parks, or technopoles, or by readapting abandoned buildings (e.g. industrial complexes)). These incubators are usually located near research institutes or technical university environments. This approach to development of incubators important amount of public investment and funding, usually supported by local, regional and state governments.

This approach, always demand high level of investments, have long development life-cycles and can suffer from low level of financing in infrastructure.

University Incubators

University incubators are established by University or higher education institutions. Size and type of those incubators largely depend on kinds of Universities. The common thing for these incubators is orientation toward innovative, research-based firms. Universities usually provide links with technology, research with additional support for commercialization. Their success is considerably tied to the capacity of linking research with industry.

Virtual Incubators

Virtual incubators are considered the “second generation” of incubators. Virtual incubators are often hosted by a university or a research center, and are characterized by their capacity to operate both within walls and outside. When they operate as “incubators without walls” they serve newly created firms without hosting them within the incubator’s facilities.

There are a few basic ‘virtual incubation’ models

- Incubator-based models – physical incubator with enhanced ‘outreach’ incubation and/or aftercare programs.
- ICT-enhanced networks - signposting via on-line portal to networks of business support organizations that combine to create an incubation system. But ‘traditional’ methods are used to deliver most services.
- Fully virtual system – most/all incubation services are available to

clients using a combination of on-line/other virtual methods.

According to Malan J., (2007) virtual incubators generally support following services:

- Early stage start-ups that do not need a physical base or who have own workspace
- Entrepreneurs who are home workers /thinking of starting up from home
- Location independent working (LID) – e.g. translation services, creative/cultural enterprises,
- ICT-based businesses or those with a high virtual content, e.g. web-designers, some high tech businesses, where support can be provided remotely (e.g. software development)
- Business incubator tenants that have graduated’ to locations elsewhere and need aftercare support/retention
- Businesses in rural regions or other relatively isolated areas, or where target group is dispersed
- Other businesses requiring specific services than can be delivered virtually (e.g. grant applications).
- Virtual Incubation Services – Examples
- Entrepreneurship appraisal - assessment of personal qualities and business ideas
- ‘Virtual office’ services – message handling, virtual post box, ICT/e-mail, website hosting
- Business services – business planning, legal advice, tax, marketing information, etc
- Access to finance – investment readiness programs, matching with investors, etc
- ‘Virtual classroom’ – business skills, finance, human resource management issues, etc
- Mentoring – advice from experts and access to experienced business people
- Networking – access to e-government (e.g. company registration), business services, other businesses/clusters, trade associations, etc
- Technology transfer – access to technology offers, licensing opportunities, etc

- Other on-line resources – web-based research facilities, patent searches, e-procurement etc

International Enterprise Centers – International Business Incubators

This model is considered the “third generation” of incubators. These incubators provide a full range of support services for the development of knowledge-based businesses. These incubators create link between different entities such as: universities, research institutes, venture capital and international joint ventures.

Incubator Networks,

This is a network of incubators within the same region or country, or with the same focus. Their strength is based on their capacity to share knowledge and resources, and on the linkages and synergies that can be created in a research and development framework.

Dot.Com Incubators

Dot.com incubators present a ‘model’ with specific features. This model of incubators or Internet business accelerators are a relatively recent but well-known phenomenon in developed markets.

Generally it is clear that incubator models have been changing during time, from models that are oriented strictly to infrastructure (buildings, etc) toward models that are more oriented toward services.

3. REVIEW OF STATUS AND DEVELOPMENT

There are different estimation concerning number of business incubators in the world today. According to Lalkaka R (2007) there are 3,000 world-wide, out of which roughly 1000 are located in North America, 1,000 in Europe and 1,000 in the rest of the world.

In Europe the highest densities are in Finland, Germany, Sweden and the UK. In the EU as a whole, there is an average of 1 incubator: 25,000 SMEs.

According to Smith D., at all (2007) number of business incubators in Europe are presented in table 1.

Table 1 - Number of Incubators in Europe

Austria	15
Belgium	13
Bulgaria	2
Cyprus	5
Czech Republic	1
Denmark	10
Estonia	2
Finland	37
France	81
Germany	202
Greece	8
Ireland	7
Israel	24
Italy	22
Latvia	2
Lithuania	4
Luxembourg	2
Malta	1
Netherlands	10
Poland	3
Portugal	8
Romania	1
Russian Federation	1
Slovakia	1
Spain	28
Sweden	21
Switzerland	3
United Kingdom	260
All Countries	774

Business incubators aim to maximize the chances of success of start-up companies by creating a supportive environment. Typically, this involves offering management assistance, mentoring, access to financing, flexible and low-cost leases, office services, etc. Different countries, different types of incubators (profit or no-profit oriented, oriented toward specific industrial branch or with general orientation)

has different distribution of provided services and level of provided service.

According to Montigny de N. (2007) Canadian census on Business Incubation is:

- Most Common Services Provided
 - Management Business Support - 71%
 - Equipment and Technical Support - 64%
 - Network and Training - 56%
- Most Important Goals
 - Creating Jobs in the Community - 64%
 - Build or accelerate growth of local Industry - 40%

- Commercialize Technology - 37%
- Management
 - Average number resources to run unit - 3.2
 - Average number Professionals - 2.2
- Source of Funds
 - Federal - 23%
 - Provincial / municipalities - 17%
 - Loans - 20%
 - Revenues from clients (rent and services)- 24%
 - Private sponsors or equity position - 1%
 - Other sources - 14%

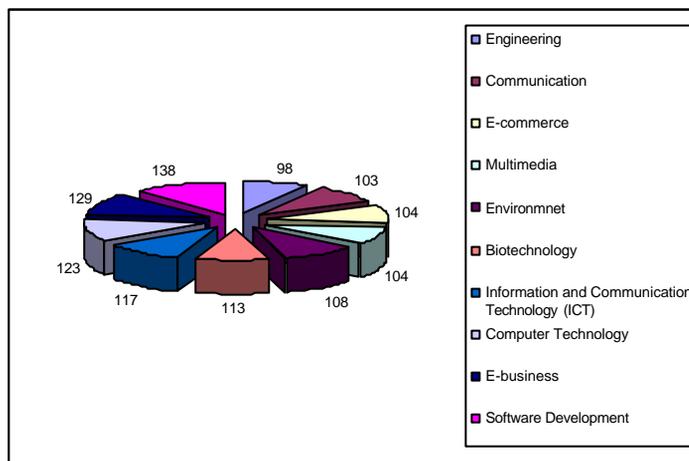


Figure 2 – Distribution of incubated business

There is also, different distribution according to incubated business. Mostly those businesses are innovative and connected with high, innovative technology (ICT technology, bioengineering, advanced manufacturing. Distribution of fields of incubated business in Europe is presented on figure 2. It is clear that the most of business are related to information technology (ICT, computer technology, software development, e-business, multimedia, e-commerce). But we can not neglect that some of business incubators are oriented toward specific business areas such: rural economy, services etc.

4. INCUBATORS IN DEVELOPING COUNTRIES

Serbia just like other developing countries has a number of problems concerning

innovation, new start-up companies and business incubators: poor growth rates, lack of Venture Capital, productivity falling behind, ageing population, massive downsizing, no European patent, public sector looking for improved governance, lack of true entrepreneurship, persistent gaps in innovation, inadequate and not focused enough business/R&D support, difficult access to EC-funds.

Since incubators, in developing countries, are typically funded by national and local governments, their attitudes towards incubation play a key role in the success or failure of incubator programs.

Some of the added difficulties incubators in developing countries are faced with are:

- the lack of financial resources available to incubators;
- the challenge of finding qualified people to staff incubators may be

- even more problematic than it is in industrialized countries;
- the lack of partnering opportunities outside the incubator organization because professional services are often scarce and focused on large companies;
- the mindset of entrepreneurs often makes them unwilling to give up equity in their companies;
- the fact that entrepreneurs may be less willing to trust outsiders;
- the general business environment may be less favorable;
- the property rights situation may be less developed;
- the fact that some national cultures may be more risk-averse;
- the lack of venture capital and networks of "angel" investors.

At the same time, incubators in developing countries have to deal with the challenge of retaining the companies that outgrow their incubator, the so-called graduates, in their region or even country. On the other hand developing countries are facing with migration of young graduates and researchers who are attracted by more promising environment in developed countries.

In the region of Western Balkan there are few successful incubators such: Porin, Modrica, Jesenice, Sezana also there are Kragujevac, Zenica, Bitola, Podgorica, Pristina.

Following issues have significant importance for development of new incubators in developing countries:

- Estimation of markets for new companies (in the newly developed incubators, Kragujevac, Bitola, Zenica, Podgorica, Pristina most of candidates are from service and agriculture sector the small number of them are from ICT or related fields),
- Identification of location (presumably near University or research centers).
- Selection of management and staff for incubator (experienced, highly education persons),
- Development of business plan for incubator (selection of services, marketing strategy, general strategy),
- Making financial arrangements (local, regional, state government and other such as BA, banks...),

- Development of complete infrastructure for incubator (building, ICT support)
- Selection of start-up business for incubation (preferably innovative, high-tech businesses).

The number of business incubators in developing countries is rapidly increasing and that will continue in the future. Information technology creates opportunities especially in developing countries and will support the growth of business incubators.

5. CONCLUSION

It is clear that business incubation is becoming increasingly important in the industrialized world and in developing countries. In developed countries they are mainly oriented toward high technology innovative firms. There is also strong connection between innovation, Universities and business incubators. In developing countries there are added difficulties for incubators.

Most of them are connected with low education level, insufficient number of innovative ideas, low level of financial resources and insufficient support by government.

In Serbia this concept is in the early stage of development. Some of general recommendation for business incubators in Serbia could be:

- Strong connection with Universities in development of scientific based incubators,
- Development of clear policy for selection of candidates for incubation with clear leaving strategy,
- Development of quality infrastructure (building, ICT, and other infrastructure)
- Development of Business Angels network, and
- Development of National Strategy for support of Business incubators.

Ensuring some of listed issues could be a great support in development of knowledge based economy in Serbia.

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