THEORETICAL AND METHODOLOGICAL APPROACHES ON THE EVALUATION OF BUSINESS INCUBATORS

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Abstract

The experience of developed countries on business incubators reveal that these establishments enable the entrepreneurs to focus on business development, job creation, and help foster interactions between entrepreneurs in a dynamic and innovative environment, which ultimately leads to the creation of small and medium sustainable entreprises.

The incubator's intensity and successful promotion of viable businesses depends on their level of development and quality. Therefore, for the evaluation of business incubators it is required to use certain indicators in order to detect factors that hinder their effectiveness. The success of a business incubator is its value to the economic environment and the ability to react quickly to changing external conditions.

Keywords: business incubator, evaluation of business incubators, incubation process, selection criteria, evaluation indicators.

JEL classification: M00- General, L30 – General, L31 - Nonprofit Institutions;

Introduction

The business incubators (BI) is an instrument for the indirect financial support mechanism for the entrepreneurship within the small and medium business, which at the final stage of incubation process will obtain the status of a successful enterprise and will contribute to supporting the new entrepreneurs who are at the stage of incubation in working effectively.

The experience of developed countries on business incubators reveal that through these incubators entrepreneurs can focus on business development and grounding concept, create new jobs, ensure interaction between different entrepreneurs in a dynamic and innovative environment, leading to creation of viable small and medium enterprises.

It is important to note that the business incubator is a specific institution within the market infrastructure, which on one hand, supports the domestic developing enterprises, and on the other hand, they fit the state requirements in supporting the start-ups, use of innovative technologies, and provide several amenities etc.

The positive influence of business incubators on a state economy is indirect, through regional development, strengthening the economic situation in disadvantaged areas, improving local business.

The business Incubator is one of the most efficient political instruments for an economic restructuring, the transition to a new technical base within the current conditions of high unemployment.

The success of a business incubator represents its value for the economic environment and the ability to quickly react to changing external conditions.

Description of the problem

The intensity and effectiveness of business incubators depend on their level of development and operation quality by promoting sustainable business. Therefore, for the evaluation of business incubators it is required the use of certain indicators and detection of factors that hinder their effective work.

It is necessary to consider the technical capacities of business incubators in determining their capability and criteria identification (indicators) in order to assess the results of business incubators.

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Methodology and data sources

There are just few research papers on financial and economic activity of business incubators. The best practices can be found in developed countries such as USA, Germany and Britain, countries where the concept of the Business Incubator was born, along with their activity.

From the reviewed literature we have selected effective methods of analysis of the results of the activity Business Incubator use of certain indicators:

- to assess the situation in the whole of the distribution the Business Incubator in a specific region,

- to calculate and analyze detailed productivity and efficiency,

- to assess the activity of a business incubator, are using qualitative and quantitative indicators,

- to assess the effectiveness and development the Business Incubator we can use and full index method

Obtained results

Table 1 shows data on incubators density distribution in the regions of Moldova. It is calculated as the ratio of the number of incubators and incubated enterprises. From the data table we can mention that the best result on the density distribution of business incubators it is in the Central Region.

After an analysis made on the distribution density of the number of economic agents operating in incubators within some EU countries that have surpassed the Moldova results, we have found the ratios for Austria (1:3), Germany (1:6) Finland (1:7), Luxembourg (1:9) and France (1:11).

So we can conclude that the number of business incubators as a support system for small and medium business are not distributed uniformly on Moldovan territory, and are inadequate. [2]

Table 1

The density distribution of economic agents working in incubators

Region	Number of business incubators	Number of economic agents	Ratio / Density
1	2	3	4=2:4
North Region	3	51	1:17
Central Region	4	34	1:9
South Region	2	32	1:16
Total	**9**	**117**	**1:13**

Source: developed and calculated by the author

There are various theoretical and practical approaches to use certain indicators to calculate and analyze in detail the productivity and efficiency of incubators.
In order to select (develop) a set of indicators, it is necessary to consider not only the static activity, but also the changes in dynamic efficiency of business incubators at local and regional levels.
Indicators selection (development) is based on the following requirements:
- general assessment of the business incubator (considering all possible outcomes obtained from the business incubator activity);

- simplicity and representativeness of the used indicators (indicators should reflect in details the analysed phenomenon and should be easily used in calculations);

- avoid duplication of indicators (evaluation system must be balanced using the set of selected indicators);

- possibility to use indicators in practice based on available information sources (statistical activity, reports, interviews, surveys).

In selecting the evaluation indicators it should be taken into account the benefit to the local community and the efficiency with which financial and human resources have been used to achieve goals. [,p.16]

The indicators used in the calculation and analysis of BI productivity and efficiency can be divided into two groups according to the source for obtaining statistical data:

- indicators from secondary data (objective data source - statistical (official) data of state organizations)
- indicators from primary data (subjective data source - data from surveys, interviews, surveys of personnel working in BI or SMEs (both incubated and non-incubated))

Further, in the table, there will be presented the indicators divided into two groups.

Table 2

Indicatorii de evaluare a eficienţei activităţii incubatoarelor de afaceri
A. Indicators from secondary data (objective data source)

Assessment parameters	Indicators	Calculation method
Development quality of small enterprises in BI	Number of incubated SME per capita	total number of enterprises in BI / population
	Share of incubated SMEs in total number of enterprises	total number of enterprises in BI / total number of enterprises
	Revenue from sales of incubated SMEs per employee	income from sales of incubated SMEs / average number of persons employed in SMEs
	Average value of income from sales per incubated SME	income from sales of incubated SMEs / total number of enterprises in BI
	Average income tax per incubated SME	income tax of incubated SMEs / total number of enterprises in BI
	Atractiveness of incubated SME	average monthly salary in incubated SMEs / average wage in the economy
Efficiency of financial resources	Financial support for SMEs in the BI from state budget sources	amount allocated from state budget or (and) local budget
	Financial support for SMEs in the BI from alternative sources	amount allocated by investors, from programs, projects, business angels, crowdfunding, venture capital
Efficiency of human resources	Average number of employees in incubated SME	number of employees in incubated SMEs / total number of enterprises in BI
	Number of incubated SME per employee	number of incubated SMEs / number of employees in BI

B.Indicators from primary data (subjective data source)

Assessment parameters	Indicators	Calculation method
Business environment within BI	Share of profitable SMEs in BI from total SME	total number of profitable SMEs within BI / total number of enterprises within BI
	Loans for incubated SME from financial institutions	amount of loans granted to incubated SMEs / total number of enterprises within BI
	"Completion" coefficient of SMEs within BI	number of SMEs that have "completed" BI / total number of enterprises within BI
	"Selection" coefficient of SMEs within BI	number of SMEs that have been "selected within BI / total number of enterprises
	Report between the "completed" and "Selected" SMEs	number of SMEs that have "completed" BI / number of SMEs that have been "selected within BI
Efficiency of innovation use	Efficiency of BI	number of start-up companies within BI / total number of enterprises
	Efficiency of innovation in supporting infrastructure	number of innovative enterprises within BI / number of infrastructure objects used in the innovation field
	BI collaboration with the academic environment	number of active academic institutions total number of enterprises
	Share of BI within university units	*total number of BI / number of BI within academic institutions*

Sourse: modified by the author according to [4]

To evaluate the effectiveness of the BI activity and development, we can use the method of integral index, which can be calculated as the geometric mean of indicators showing the status and development of the BI, according to the following formula:

$$Ip = \sqrt[n]{i_1 * i_2 * \ldots i_n} \quad (1)$$

where:

Ip – performance index of evaluation and development of the Business Incubator;

$i_1, i_2, \ldots, i_n$ – indicators of activity and development of incubated companies during a set period. [3,5]

The discrepancies between the socio-economic environments, where the incubators are set up, make difficult to establish a generally applicable quantitative rule on assessing the success of an incubator. For example, an area of intense business activity will be more favorable for the development of a business than an area with limited economic activity, limited financial and human resources.

The evaluation of a business incubator in terms of implementing active measures to combat unemployment, could be done through a number of qualitative and quantitative indicators. The following criteria must be considered when making a real assessment of the business incubator:

- *results-based criteria (monitoring):* use of surface area (in m2); average number of new jobs created by each incubated SME; number of incubated SMEs; incubated companies' activities; number of new-developed incubated SMEs; grants obtained by each incubated SME; number of SMEs excluded from the business incubator; number of employees of the BI manager; ratio between the number of BI employees / incubated SME; quality of delivered services; number of created spin-offs; number of other created or involved companies; local added value (ex: new created jobs and higher local living standards).

- *economic criteria (impact assessment):* average operational costs; average costs of capital investments; cost per job (gross); failure rate of incubated SMEs after the incubation period; survival rates of SMEs after the incubation period; value of investments in fixed assets / total amount of investments made by incubated companies; amount of foreign investments; average growth in turnover, other economic and financial results; trade and economic partners outside the geographical area [1, p.16].

Also an important step in the analysis of business incubator efficiency, according to the indicators, is to objectively evaluate the results of their activity. This assessment should identify:

- Analisys of BI carried out according to the BI activity plan (forecast).
- Highlight the indicators which do not meet the restricted parameters and identify their cause;
- Highlight the indicators which have not meet the restricted parameters and identify the cause.

In order to accurately identify the most pressing problems in BI activity, the incubator staff and the companies that operate within the incubator should be interviewed.

As the international practice shows, after finishing the incubation cycle of the company and completing it, only 20% of BI continue working with them, without offering any direct or indirect support.

Conclusions

In conclusion we can mention that the main assessment indicators of business incubators efficiency are: the number of incubated companies that have "graduated" BI, the number of new jobs created by the incubated companies and the percentage (number) of incubated enterprises that have survived and are active in business. Howevwr, any of the above methods can be used to assess the activity of business incubators. During its activity, a BI must establish (form) a mechanism that enables a closer collaboration with incubated companies.

As a result of BI activity analysis, there should be an action plan containing measures to balance the created situation (results) oriented towards:

- Increase efficiency and effectiveness of BI
- Increase efficiency of each BI process activity;
- Improve the quality of services in accordance with the consumers requirements;
- Improve the mechanism for creating successful businesses;
- Select and evaluate the factors influencing the BI activity, etc.

The performance of a business incubator must be primarily assessed in terms of results. Thus, the social effect (number of new created jobs) and the economic effect obtained within the region or settlement (number of SMEs in addition to the local situation, before the creating the incubator or a completed cycle of incubation) should be used as key performance indicators.

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