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Categories of incubator success: A case study of three New York incubator programmes

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*Incubator success of three
New York incubator programmes*

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Abstract

Purpose The purpose of this paper is to investigate and identify three categories of incubators in the United States (US) located in New York (NY). The incubator categories are: 1) technology commercialisation; 2) economic development; and 3) entrepreneurship.

Methodology The study uses a qualitative approach based on interviews concerning three incubator programmes selected for their successful outcomes.

Findings The research findings suggest four priorities for incubators: 1) to be dynamic models of self-sustainable, efficient business development; 2) to provide helpful tools for generating jobs; 3) to foster and support enterprise and innovation to create the best environment for the start-up and smart growth of businesses; and 4) to support value-added businesses through various means, such as developing the region's science parks and R&D centres, improving collaboration between universities, and supporting business investment and growth.

Originality/value The research adds value to academicians and practitioners such as government, funded organisations, institutions and policy-makers.

Keywords Incubators, Economic development, Technology commercialisation, Entrepreneurship.

Paper type Research paper

Introduction

In developed and developing countries, there are more than 7000 incubation programmes worldwide engaged in supporting the development of new high-growth businesses (EDA, 2011; Monkman, 2010). Several research studies on incubators have been undertaken, particularly in the United States and other countries worldwide (Temali and Campbell, 1984; Allen and Rahman, 1985; Plosila and Allen, 1985; Campbell et al., 1985; Brooks, 1986; Fry, 1987; Merrifield, 1987; Smilor, 1987; Hisrich, 1988; Campbell, 1989; Allen and McCluskey, 1990; Mian, 1994b; Culp, 1996; Mian, 1996a; Mian, 1996b; Mian, 1997; Autio and Kloftsen, 1998; Thierstein and Wilhelm, 2001; Colombo and Delmastro, 2002; Hsu et al., 2003; Abetti, 2004; Pena, 2004; Lee and Osteryoung, 2004; Peters et al., 2004; Rothschild and Darr, 2005; Etzkowitz et al., 2005; Totterman and Sten, 2005; Chan and Lau, 2005; Rothaermel and Thursby, 2005a; Rothaermel and Thursby, 2005b; Wynarczyk and Raine, 2005; von Zedwitz and Grimaldi, 2006; Kim and Armes, 2006; Studdard, 2006; Gassmann and Becker, 2006; Chandra et al., 2007; Aerts et al., 2007; Hytti and Maki, 2007; Hughes et al., 2007; McAdam and Marlow, 2007; Akçomak and Taymaz, 2007; McAdam and McAdam, 2008; Schwartz and Hornych, 2008; Chandra and Fealey, 2009; Akçomak, 2009; Atherton and Hannon, 2006; Schwartz, 2009; Voisey et al., 2006; Monkman, 2010; Al-Mubaraki and Busler, 2012a; Al-Mubaraki and Busler, 2012b; Al-Mubaraki, and Busler, 2012c; Al-Mubaraki and Busler, 2012d; Al-Mubaraki and Busler, 2012e; Al-Mubaraki, Ahmed and Al-Ajmei, 2014; Al-Mubaraki and Schrödl, 2012a;

Al-Mubaraki and Schrödl, 2012b). Business incubators act as an economic strategy to develop new and emerging social and economic opportunities in the growth and commercialisation of new products, new processes and new business models. The strategic benefits and objectives lead to several elements such as creativity, innovation and entrepreneurship with respect to business incubation models (Joseph and Eshun, 2009; Allen and Levine, 1986; Roper, 1999). Furthermore, many studies have identified the successes of incubators and the fact that they support new venture creation and add value (Culp, 1996; Lumpkin and Ireland, 1988; Merrifield, 1987; Kuratko and LaFollette, 1987; Bearnse, 1998; Mian, 1994a, 1997; Phillips, 2002; McAdam and McAdam, 2008).

This paper is structured as follows: the next section provides a thorough review of the literature on the details of incubators. The research methodology section follows, including the successful interviews describing three categories of incubators in the US: economy development, technology commercialisation and entrepreneurship. This is followed by a brief discussion of the findings of the study drawn from the analysis of US incubator programmes. The final section presents a conclusion based on the study's discussion and results.

Review of the literature

Al-Mubaraki and Busler (2010a) indicated that business incubators contribute to the international economy and play a vital role not only in the economic recovery but also in econom

ic development. International adaptation leads to the support of diverse economies, the commercialisation of new technologies, jobs creation and wealth building. Al-Mubarak and Busler (2010b) stated that business incubators are being used as economic development tools by nearly every country. This study identified the strengths, weaknesses, opportunities and threats. See Figure 1.

Al-Mubarak and Busler (2011a) indicated four priorities; first, business and technological incubators have considerable potential for contributing to economic development, as demonstrated by evidence of job creation, enhanced firm survival rates and increased technological innovation. Second, apart from the role of the impact of business incubators, contextual factors may also play an important role. From the studies conducted in the US, it can be argued that business incubation may only have a significant impact on economic development if it occurs in the context of broader economic reforms and investment in infrastructure, led by governments. Third, some of the aspects and activities of business and technology incubators can hinder rather than promote economic development, for example, by promoting an approach which is too academic, or by creating industrial or geographical clusters of firms rather than the diversification which may be needed for healthy economic growth. Fourth, the role of business and technology incubators in generating social and intellectual capital and the impact of these forms of capital on economic development are hard to measure, largely due to the difficulties of even defining these forms of capital; moreover, the available research evidence in this area is very limited.

Another study by Al-Mubarak and Busler (2011b) identifies the strengths

of the European case studies as (a) to support economic development by creating new jobs; (b) to accelerate the modernisation and diversification of the region's economy; (c) to foster and support enterprise that creates the best environment for businesses to start up; (d) to invest time and effort long-term to strengthen the relationships between academia and industry; (e) to provide networking opportunities between academia and industry to collaborate for mutual benefit; and (f) to commercialise knowledge and build relationships that give value to new economies. In their 2012 study, Al-Mubarak and Schrödl (2012b) proposed a measurement model concerning the international context. The four measured indicators are: graduation of businesses incubated, success of businesses incubated, jobs created by incubation and salaries paid by incubator clients. The recommendations from the study could be of help in developing business incubation guidelines for best practice in GCC, which leads the economic development worldwide. Al-Mubarak and Busler (2012a) concluded that incubators or innovations are a vital tool for technology transfer, jobs creation, entrepreneurship and the commercialisation of technology.

Recently, Al-Mubarak and Busler (2013) discussed a best-practice model based on the lessons learned from quantitative and qualitative approaches of incubators, including five international case studies and survey findings indicating that in order for business incubators to be inclusive and create smart, sustainable growth, they should follow certain criteria:

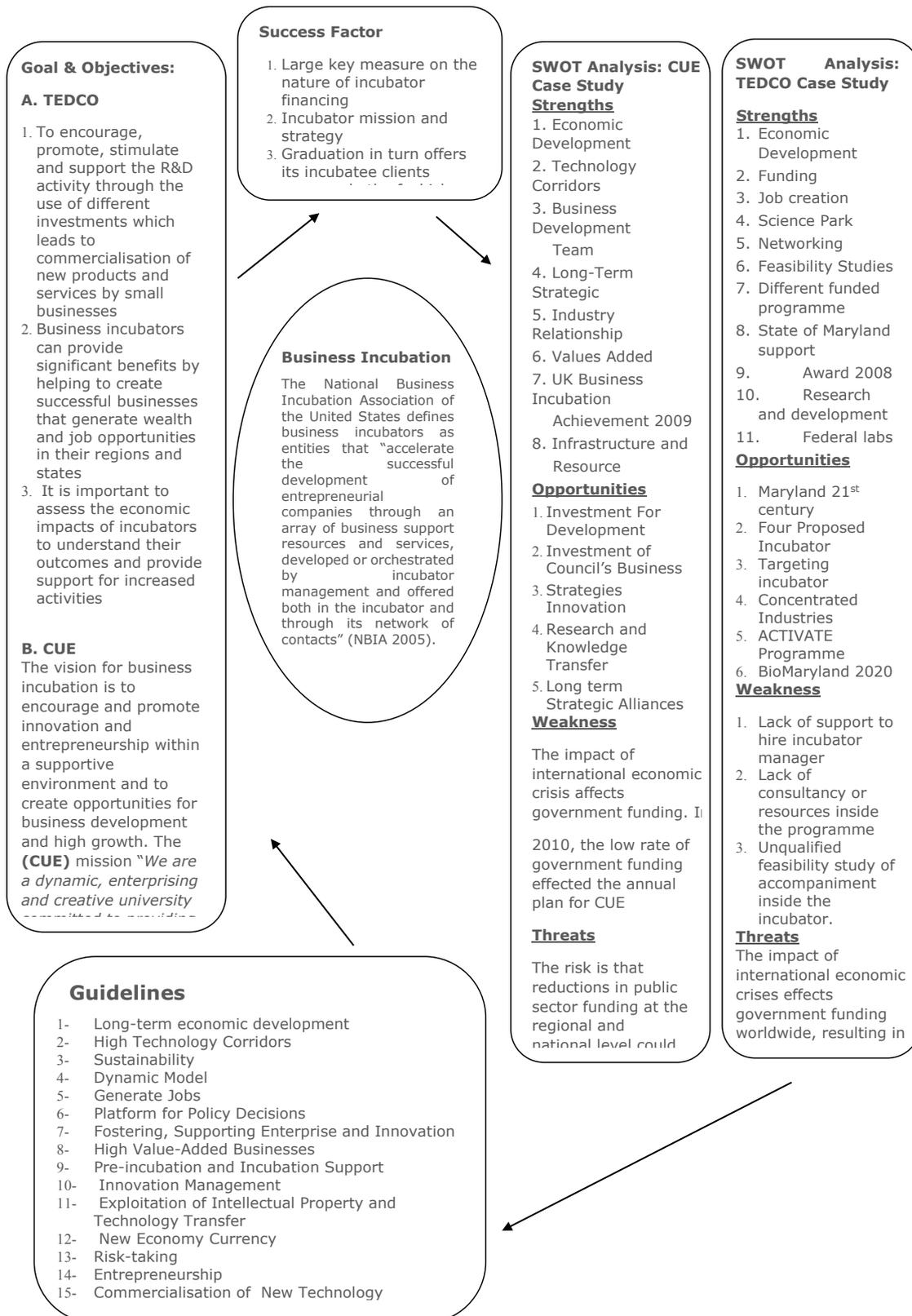
- 1) *Clear incubator goals can increase the rate of graduation companies from incubation programmes,*
- 2) *High survival rate of companies ranged at 81–90%; this percentage*

leads to the sustainability of companies in the market,

3) High rate of employment creation leads to economic development, and

4) Active role of cooperation of R&D contributes positively on technology transfer and increment in the rate of patents.

Figure 1. SWOT result



Methodology

The research was undertaken using an in-depth literature review and interview as part of a qualitative research strategy. The three interviews were undertaken with the directors of each incubation programme as listed in Table 1, which includes the location of the incubators in New York City, US. In addition, the in-depth interview used a radar chart including three categories: technology commercialisation, economic development and entrepreneurship. Each category was measured on three key indicators, and each indicator is a rank-order independent variable [e.g., low (L, 60%), moderate (M, 80%), and high (H, 100%)].

During the interview with the director of the first case, 'Entrepreneurship Space-Mi Kitchen es su Kitchen', the answer for categories included the following: technology commercialisation – high. Economic development – high. Entrepreneurship – high (see Figure 2). The second interview, with the director of 'New York University Incubator', produced high answers for the three categories (see Figure 4). Finally, the third interview, with the vice president of 'Stony Brook University', produced high answers for three categories (see Figure 3).

Table 1. US interview developed by the author

No.	Institute	Website	Contact details
1	Entrepreneurship Space-Mi Kitchen es su Kitchen	http://www.mikitchenessukitchen.com	Ms. Kathrine Gregory Founder & Director, Mi Kitchen es su Kitchen, NY, US
2	New York University (NYU) Incubator	http://w4.stern.nyu.edu/berkley/student.cfm?doc_id=2494	Mr. Micah Kotch Director of Operations, NYU Incubator, Brooklyn, NY, US
3	Stony Brook University Office of the VP for Research	http://www.lihti.org/	Dr. Ann-Marie Scheidt Chair, Tenant Selection Committee Stony Brook Univ Office of the VP for Research, Stony Brook, NY, US

Figure 2. Radar chart of Entrepreneurship Space-Mi Kitchen es su Kitchen, NY, US

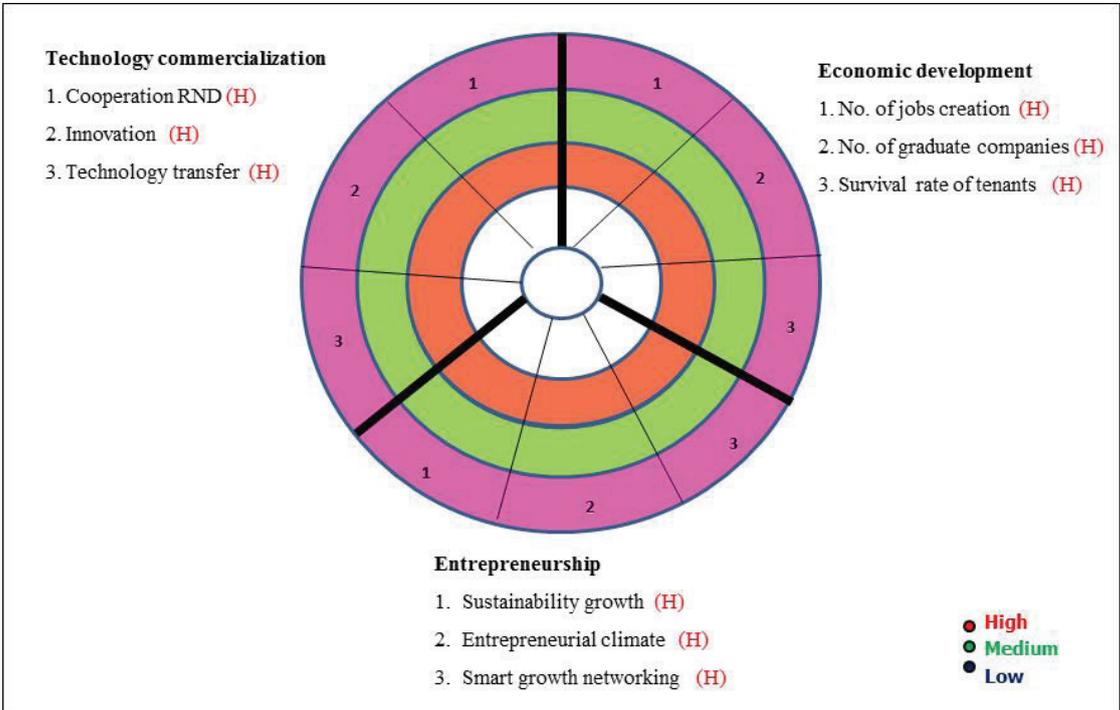


Figure 3. Radar chart of Stony Brook University Office of the VP for Research, NY, US

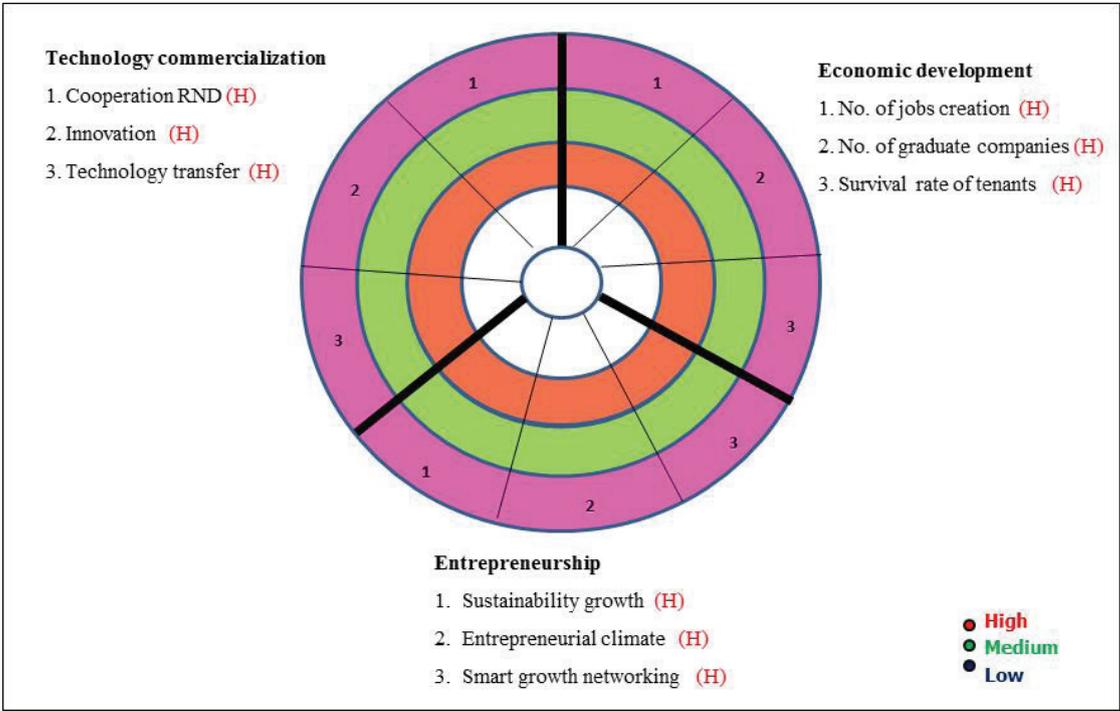
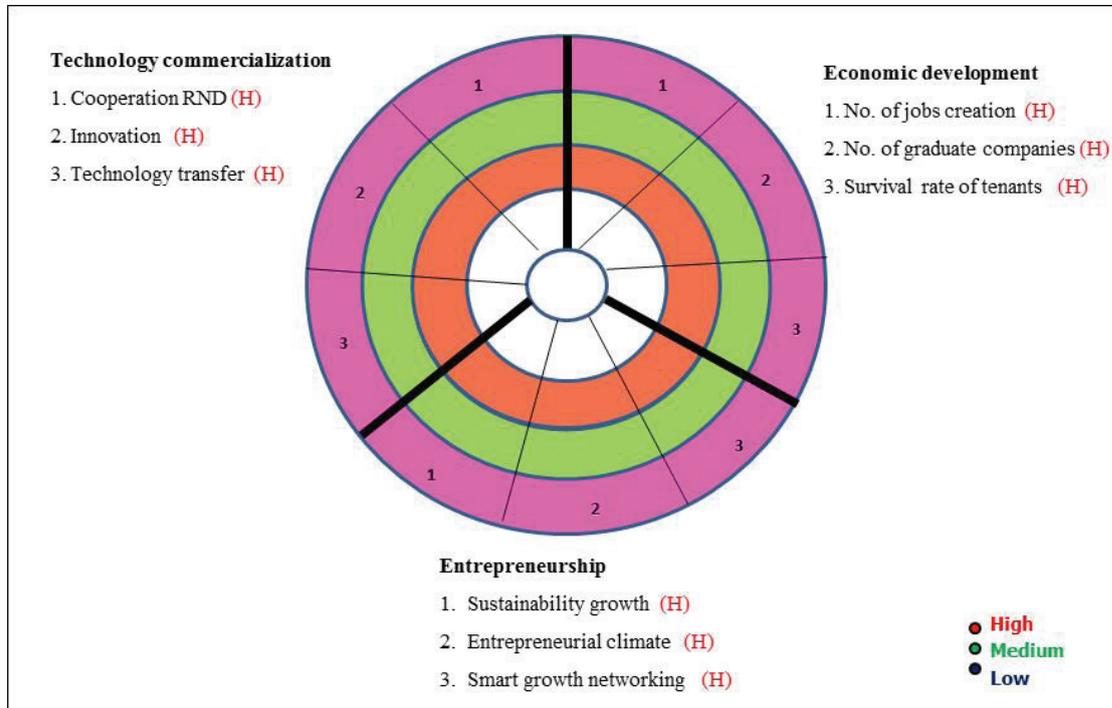


Figure 4. Radar chart of NYU Incubator, NY, US



Findings

According to Table 2, the scales of the three categories were high (H) 100% for technology commercialisation, economic development and entrepreneurship. The results of average indicators of entrepreneurship for Space-Mi Kitchens su Kitchen, NY, US were high (H). In Table 3, the scales of technology commercialisation, economic development and entrepreneurship were high (H), 100%. The results of the average indicators of Stony Brook University, NY, US were high (H).

As shown in Table 4, the scales of three categories were high (H) 100%, including technology commercialisation, economic development and entrepreneurship. The results of average indicators for NYU Incubator, NY, US were high (H).

These findings show the positive outcomes from incubators as value added to the US, specifically to New York.

Table 2. Result of average indicators of Entrepreneurship Space-Mi Kitchen es
su Kitchen, NY, US

Key indicators	Categories	Scale			Indicators %	Average %*
		High (100%)	Medium (80%)	Low (60%)		
1. Cooperation RND	Technology commercialisation	100			100	100
2. Innovation		100			100	
3. Technology transfer		100			100	
1. No. of jobs creation	Economic development	100			100	100
2. No. of graduate companies		100			100	
3. Survival rate of tenants		100			100	
1. Sustainability growth	Entrepreneurship	100			100	100
2. Entrepreneurial climate		100			100	
3. Smart growth networking		100			100	
Average**	H				100	

* sum of indicators in each categories divided by 3

** sum of average categories divided by 3 (key indicators)

Table 3. Result of average indicators of Stony Brook University Office of the VP for Research, NY, US

Key indicators	Categories	Scale			Indicators %	Average %*
		High (100%)	Medium (80%)	Low (60%)		
4. Cooperation RND	Technology commercialisation	100			100	100
5. Innovation		100			100	
6. Technology transfer		100			100	
4. No. of jobs creation	Economic development	100			100	100
5. No. of graduate companies		100			100	
6. Survival rate of tenants		100			100	
4. Sustainability growth	Entrepreneurship	100			100	100
5. Entrepreneurial climate		100			100	
6. Smart growth networking		100			100	
Average**	H					100

Table 4. Result of average indicators of NYU Incubator, NY, US

Key indicators	Categories	Scale			Indicators %	Average %*
		High (100 %)	Medium (80%)	Low (60 %)		
7. Cooperation RND	Technology commercialisation	100			100	100
8. Innovation		100			100	
9. Technology transfer		100			100	
7. No. of jobs creation	Economic development	100			100	100
8. No. of graduate companies		100			100	
9. Survival rate of tenants		100			100	
7. Sustainability growth	Entrepreneurship	100			100	100
8. Entrepreneurial climate		100			100	
9. Smart growth networking		100			100	
Average**		H				100

* sum of indicators in each categories divided by 3

** sum of average categories divided by 3 (key indicators)

Summary and conclusions

The following general conclusions can be drawn from the an overview of the findings of three US interviews concerning business incubation programmes including Entrepreneurship Space-Mi Kitchen es su Kitchen, Stony Brook University and NYU Incubator, located in New York:

- 1) The high economic development indicated a high survival rate of tenants, a high number of jobs created and graduate companies which lead to a positive impact of incubators as a vital tool for economic development.*
- 2) The high technological commercialisation indicated high cooperation of research and development, high innovation and successful technology transfer.*
- 3) The high entrepreneurship fosters the entrepreneurial climate, leading to high sustainability and smart growth.*

Based on the above, it can be concluded that the average of the three categories, including economic development, technology commercialisation and entrepreneurship indicates that the incubators act as:

- 1) A dynamic model of self-sustainable, efficient business development.*
- 2) A helpful tool to generate jobs.*
- 3) A method of fostering and supporting enterprise and innovation to create the best environment for the growth of businesses, both at start-up and to accelerate smart growth.*
- 4) High contributors that add value to businesses by developing the region's science parks and R&D centres, improving collaboration between universities and supporting business investment and growth.*

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