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## INCUBATORS BASED ON INNOVATION IN FRANCE

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**Abstract:** *Purpose* – The objective of this paper is twofold: (1) discuss and analyze the adoption of incubators based on the innovation in France as successful case studies, and (2) identify the ratio of performance indicators of successful incubators.

*Methodology* – The investigation and analysis of literature is an accepted form of desk-based research that compares the works of different authors. This type of approach is closely qualitative (multi-case studies, literature review) and allows a broader assessment of a particular and real situation.

*Results* – The results of the literature review and case studies indicate the value-added capability of incubators: job creation, entrepreneurship, technology transfer, commercialization, reduction of indirect start-up costs for companies, and graduation companies in the market. The results also show qualitative responses used to determine success rates and key indicators of incubators in various settings.

**Keywords:** *Incubators, Economic development, Employment creation*



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## INTRODUCTION

## Incubators based on innovation in France

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Countries around the world are working to be successful in today's dynamic environment. Amid economic and political turbulence, each nation is looking for ways to sustain its economy and to create a self-sustaining economy. This strategy leads the spirit of entrepreneurship and can be used to create start-up companies to enable self-sustainability and to build an innovation-based economy. As start-ups are most vulnerable during their infancy, having a conducive environment that will help to develop and guide these initiatives is critical. One of the most notable enterprises designed to support the entrepreneurship initiative is "business incubators".

According to the National Business Incubation Association (NBIA, 2012), a business incubator provides business support to young companies with the goal of producing "successful firms that will leave the incubation programme financially viable and freestanding". The types of business support provided can range from tangible to intangible resources (Gassmann and Becker, 2006). The most obvious type of tangible support provided by an incubator is access to an operating space and shared facilities. By having a group of entrepreneurs sharing physical locations and facilities, incubators help to reduce the heavy financial burden often faced by start-ups. As for intangible resources, business incubators give guidance and advice that will assist start-ups in running and managing their businesses.

To further appreciate the value of business incubators in revitalizing the economic development of a nation, this paper aims to discuss and analyse the adoption of incubators based on the innovation in France as successful case studies, and identify the ratio of performance indicators for successful incubators. The rest of the paper is organized as follows. Section 2 discusses innovation based on incubators. Section 3 presents three cases of incubators in France along with their performance indicators. Section 4 discusses the differing performances among French incubators and concludes with suggestions for future research to further understand the performance of a business incubator.

## INNOVATION BASED ON INCUBATORS

Incubators support entrepreneurship for the creation of start-up companies. In Europe, there are more than 900 incubators including those

in France, U.K. and Germany. These three countries house approximately 83 per cent of all the incubators located in Europe and have a survival rate of 90 per cent (AL-Mubaraki and Busler, 2011). In France, the term incubator is used for the process of supporting entrepreneurs before the start-up company is formed. The term *pe'pinie're* is primarily used after the company start-up. France's first incubator was created in Evry in 1985 and became the model for European Union sponsored business and innovation centres (BIC). Moreover, incubators in France focus on the development and diversification of local economies. In turn, their goal is to lend a high level of support for government organizations to create their own incubators (NBIA, 2010).

According to the Agency for Enterprise Creation/APEC, there are an estimated 220 incubators in France (NBIA, 2010). France's association of business incubator managers, ELAN, believes that 150 business incubators in France either meet or could meet the criteria that they have determined qualify for membership. ELAN is known throughout France to be a leading force in the business-creation network and plays a major role in developing regional networks. Currently, there are fourteen local networks grouped together in four to thirty business incubators. The largest of these networks are in Aquitaine, Pays de Loire, Ile de France, Provence-Alpes Maritimes - Côte d'Azur, and Brittany. In addition, ELAN follows up on 2000 new businesses and accompanies 8000 projects each year (EEC, 2004).

At present, business incubators in France are divided into four types: 1) Generalist Business Incubators: the majority are of this kind, which host a variety of businesses types; 2) High-Tech or Innovative Business Incubators: these give priority to hosting start-up businesses with a technical, technological or innovative focus, such as new information and communication technologies; 3) Crafts Business Incubators: only a few of these are found in France, and they are often associated with, run by or set up by Consular Chambers of Commerce; and 4) Theme-Based Business Incubators: this concept is very specific and/or localized. We found only a few such incubators, which focused on *métiers* associated with the sea, or with agriculture or cross-border trade.

Today (EC, 2012), Europe 2020 has outlined goals and strategies for a vision of Europe's social market economy for the 21st century. The goals of Europe's 2020 plan focus on three main priorities: 1) Smart growth: developing an economy based on knowledge and

innovation; 2) Sustainable growth: promoting a more resource efficient, greener and more competitive economy; and 3) Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

Europe's strategies for smart growth will be driven by innovation and knowledge (White House, 2010; EURP, 2010; EBN, 2010; EC, 2010; Eshun, 2009). Innovation involves the process of making changes, differences and novelty in products and services, and adding value and a viable business manner to create and ensure economic and social benefit. The innovation process also requires improvement in such criteria as a) quality of education, b) strengthening of research performance, c) promoting innovation and knowledge transfer, d) using the information and communication technologies and ensuring that innovative ideas can be turned into new products and services that create growth, and e) quality jobs that help address European and global societal challenges.

Europe's action plan for innovative growth will concentrate on the following: 1) Innovation: more needs to be spent on R&D. R&D spending in Europe is below 2 per cent, compared to 2.6 per cent in the US and 3.4 per cent in Japan, mainly due to lower levels of private investment, 2) Education, training and lifelong learning: statistically, one fourth of all students have below average reading competencies and one in seven youths quit education and training too early. Around 50 per cent reach medium qualification levels, which often fail to meet labour market needs, and 3) Technology-based society: the global demand for information and communication technologies is a market worth €2000 billion with European firms contributing only one quarter.

Innovation-based incubators support innovative business projects, which could be either technologically or non-technologically oriented. The measurement of technology support is based on the degree of innovation in a business idea (EC, 2010). Furthermore, innovation-based incubators are powerful tools for local economic development (EURP, 2010; AL-Mubarak and Busler, 2009; Eshun, 2009; AL-Mubarak and Busler, 2010).

Incubators provide support environments for new high-tech venture creation, technological entrepreneurship, commercialization, and transfer of technology (Mian, 1994 and 1997; Phillips, 2002; McAdam

and McAdam, 2008; AL-Mubarak, 2008). Incubators tend to be initiated whenever entrepreneurs need support to develop their own business. In other words, the process of business incubation is to help develop their business idea and transform it into a viable and sustainable enterprise (NBIA, 2010).

At present, various reports from Europe (EBN, 2009; OCDE, 2010) state that innovation R&D spending in Europe is below 2 per cent, compared to 2.6 per cent in the US and 3.4 per cent in Japan, primarily due to lower levels of private investment. One goal is to re-focus R&D and innovation policy on the challenges facing European society. Every link in the innovation chain needs to be strengthened from 'blue sky' research to commercialization. Accordingly, when a direct relationship exists between innovation, entrepreneurship and job creation based on incubators, the benefits of economic growth should reach the public (EBN, 2009; OCDE, 2010).

#### **CASES OF BUSINESS INCUBATORS IN FRANCE**

The following provides brief descriptions of three incubators in France while Table 1 presents four performance indicators of each of the incubators.

##### **France (SYNERGIA – Agence de développement économique Caen la mer)**

Located in France, SYNERGIA – Agence de développement économique Caen la mer, was founded in 1987 to provide an environment for the creation of innovative businesses and accelerates the development of existing companies through the solid backing of original initiatives. The goal was to foster creativity among start-ups and SMEs. Initially, the Strategic Partnerships are EBN, RETIS, IASP, RDT (Technology Development Network), Calvados Terre d'Entreprises and Local Government (Agglomération Caen la mer). Synergia programmes contribute to 1) the reinforcement of performance zones; 2) competitiveness clusters; and 3) play an active role in territorial marketing and events, focusing on the development of innovation and networking with local business and education institutions. Today, it also earns income from services and incubation provided to companies. Its incubation space totals 5,000m<sup>2</sup> and is spread over four different sites: Mons, Bince, Tournai and Enghien.

### France (Promotech)

Like PREMICE, Promotech originated in a higher education institute. In 1980, two faculty members founded Promotech as a spin-off from the Department of Innovation Management of the National Polytechnical Institute in Lorraine with the goal of transferring university technology to industry. Today, Promotech has become a common initiative of the local government, the Chamber of Commerce and private companies and offers services to entrepreneurs-to-be, research units and companies. Despite its broadening focus, the target market of Promotech is still students and young graduates with creative and innovative ideas.

### France (PREMICE - Pôle de Ressources et de Management de l'Innovation et de la création d'entreprises)

In 1999, the University of Bourgogne, along with seven other key regional stakeholders, formed PREMICE. This initiative reflects the transformation of institutes of higher education all over the world from pure traditional teaching and research to include active participation in regional economic development. Founded on its mission to “promote, encourage and develop high innovative and technology firms based on university or R&D centres discoveries”, PREMICE works intensively with universities and research centres to identify and help to commercialize innovative ideas. It also offers services such as access to laboratories and equipment, the sharing of scientific knowledge, validation of business models, and implementation of developmental business projects.

As can be seen in Table 1, all three cases presented here underscore the value of business incubators in revitalizing the economic development through job creation and start-up companies as well as through fostering the entrepreneurship climate. To compare the performance among these incubators, Table 2 presents the ratio of each performance indicator over the number of years a particular incubator has been in operation. It is evident that French incubators are performing better than others (Promotech). The top performance in terms of the number of companies that are being created with the centres' support average at fourteen companies every year, and the number of entrepreneurs assisted by the incubators is seventy-eight entrepreneurs per year. France (SYNERGIA–Agence de développement économique Caen la mer) performs best, with an average of eight graduands every year as the number of companies who graduate from the incubators. In terms of the number of jobs that

**Table I:**  
Business  
incubators and  
their performance  
indicators  
(compiled from  
information in  
Quintero, 2009)

Incubators	Objectives	Target market	Founded year	Performance Indicators <sup>3</sup>			
				Companies created with the centre's support	Companies graduated from the incubator	Entrepreneurs assisted	Jobs created with the centre's support
France (SYNERGIA – Agence de développement économique Caen la mer)	Innovation Synergia accompanies the creation of innovative businesses and accelerates the development of existing companies through the solid backing of original initiatives		1987	87	205	33	61
France (Promotech)	“To promote and transfer technology from the University (i.e., National Polytechnical Institute in Lorraine) towards Industry by creation of new companies or diversification of regional SME.”	Mainly students and young graduates	1980	460	164	2,500	1,200
France – (PREMICE - Pôle de Ressources et de Management de l’Innovation et de la création d’entreprises)	“To promote, encourage and develop high innovative and technology companies based on university or R&D centres discoveries”	Entrepreneurs	1999	44	75	25	1,551

<sup>3</sup>Figures are current as of 2007.

Incubators	Years (started up to 2012)	Ratio of performance indicators over the years <sup>†</sup>				Incubators based on innovation in France
		Companies created with the centre's support	Companies graduated from the incubator	Entrepreneurs assisted	Jobs created with the centre's support	
France (SYNERGIA – Agence de développement économique Caen la mer )	25	3.48	8.2	1.32	2.44	<b>140</b>
France (Promotech)	13	14.38	5.13	78.13	37.5	
France (PREMICE - Pôle de Ressources et de Management de l'Innovation et de la création d'entreprises)	32	3.38	5.77	1.92	119.31	

**Table 2:** Ratio of performance indicators for each incubator over the years

<sup>†</sup>The ratio is obtained by dividing the overall performance indicator of each category by the number of years an incubator has been in existence.

are created with the centres' support, the French (PREMICE-Pôle de Ressources et de Management de l'Innovation et de la création d'entreprises) create 119 jobs each year.

## DISCUSSION AND CONCLUSIONS

Innovation-based incubators are powerful tools for local economic development; the business incubator provides business support to young companies with the goal of producing smart growth for developing the economy based on knowledge and innovation. The process of business incubation develops the business idea and transforms it into a viable and sustainable activity.

As can be seen from information presented in Section 3, some incubators perform better than others. Several reasons may contribute to this difference in performance. First, incubator age: years of experience and networking can accelerate the number of jobs created compared to newer incubation programmes with less experience and networking.

Second, incubator management assists the entrepreneurs with tangible services. For example, if the incubators created a high number of companies, this led to the assistance of a high number of entrepreneurs inside the incubators. Third, companies graduated from the incubator, and if the number of graduation companies increases, a high number of jobs are created, which leads to an increased employment rate. This increment reflects a positive effect on economic development.

At this point, the reasons presented above are based on the authors' own perspectives. The French incubators are performing better than others. Moreover, analysis needs to be carried out in order to examine the three points raised above and to determine the relationship between the incubators inputs and outputs.

Finally, the cases presented in this paper are all from France, which has a high employment rate. In future research, we plan to examine cases from other regions, such as Europe and Latin America. We also plan to focus on cases from Europe by comparing and contrasting differences between incubators from different regions. This analysis will provide useful lessons that will be valuable for the future expansion and development of business incubators worldwide.

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