“The role of Science Parks and Business Incubators in converging countries: Evidence from Portugal”

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Synopsis

The article “The role of science parks and business incubators in converging countries: Evidence from Portugal”, from Tiago Ratinho and Elsa Henriques, in 2009, explained the importance of Science Parks (SPs) and business incubators (BIs) in economic growth, most concretely in the creation of job and wealth in developed and developing countries in a converging economy, such as Portugal.

The title illustrates the real content of the text, inspired in the real Portuguese economy needs to converge into a developed economy.

In a first approach, the authors describe the history, context and definition of SPs and BIs. Starting from a general and international perspective, the article flows into the particular case of the Portuguese economy. Goal-focused, the article has an easily reading and give us a support in the reflection of BIs and SPs relevance into economy environment.

During the attendance of the Globalization and International Economics Integration classes in ISCTE-Business School, the main message was that from all human history until the current situation, what defines the different economic growth performances in all societies was the “innovation and organization structure management” (Sandro Mendonça, 2010).

In this critical perspective of the article, my goal is to analyze and evidence different concepts on the following pages, which should be recognized as relevant for the discussion of the respectable article.
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1. **SPs and BIs importance in Portugal**

Currently the globalization process and the consequent international competition demands strong and efficient economies. Competition between different economies is high and intense for all economic agents, which implies more attention and differentiation from each market player every day.

According to the authors of the article, in order to prepare the economy for international challenges, it is important for each country to invest in Research and Development and to provide successful SPs and BIs with proper links between Universities, start-ups and other relevant institutes. In other words, it is important to provide different efforts to invest directly on scientific knowledge to allow stronger performance of technologic development and institution management techniques.

Portugal, as a converging economy with lower competitive advantages and poor production elements than the developed countries, requires an extra attention into Research and Development. SPs and BIs, in this case, have a crucial importance for Portugal to stop following the last innovations and organization structures, and start to create its own new products and services, differentiating from other economies.

On the other hand, the development of entrepreneurship spirit is important for the Portuguese economy, and should be inspired directly in high schools and universities, eliminating bureaucracy steps in the implementation of new companies, facilitating access to financially projects, and promoting risk interests between the public and private sector, deeply reducing the unsuccessful stigma, valuating the company spirit.

So, the creation of Technology and Science Parks in different regions involves a group of entities that embrace efforts to achieve dynamism in innovation and entrepreneurship, increasing then the possibility to develop new industries in the region, national and international investors’ attraction and facilitating the acquisition of the innovation capacity, diversifying and improving equipments and technologies from the traditional companies.

After an extensive research on nationally and internationally concepts, we simply consider that the goal of SPs and BIs is to grant an excellent and demanding platform to enable each economic agent to explore and develop their entrepreneurship and innovation potential in order to have impact on the society.

Therefore, who are the economic agents participating directly and indirectly on the SPs and BIs? How can they explore and develop their potential regarding entrepreneurship and innovation? How are
the human resources potential being measured? And about excellence and demanding, is this easily quantified by different criteria from different SPs and BIs?

Regarding the impact on the society, the concept is mostly diverse as well. How could a BI or SP contribute directly to the society? How can different organizations organize themselves in order to track the strategic and planning results?

These few questions were answered on the article and I will briefly investigate and analyze them in this document.

The article is from 2009, which has already some gaps between the date of the article and the current date, 2010. One of the biggest evidence is that the number of SPs and BIs has increased a lot in Portugal. But how is the current performance? Would the experience of SPs and BIs has been filtered in the right way with the orientation to not have any additional issue in the current status?

As referred in the article, the relevance of SPs and BIs is high for such a small, open and internationally integrated economy as the Portuguese one. In order to converge the economy into the reference of the Northern economies, Portugal has to create an added value higher than these economies. This is only possible with a dynamic and efficient structure and either SPs and BIs can contribute directly to this result.

2. Definition and characteristics of SPs and BIs

The main goal of the authors was to look for the performance and definition of the SPs and BIs in Portugal. The article flows, the goals are easily perceptible and it was properly prepared. Different cultures have different perceptions of SPs and BIs. The article begins with the strategy to define this from a global perspective.

By the end of the article, it is possible to understand that even inside a small country as Portugal, the definition of the SPs and BIs is totally different.

In the article, the definition of a Science Park is clear and there is a brief explanation of its mission, role and support. Usually there is a combination of Science Park and Technology Park (STPs) and these two perspectives are integrated into the same perception.

In general, the mission of a Science and Technology Park is to increase the development of the region as one of the leading urban centers in the country through the active acquisition of innovative investors and to ensure optimum support for development of advanced technologies and organizational solutions by offering customized services and cooperation with science circles.
To understand the role of STPs in economic development, first of all we must fix the concept of what we understand by Science or Technology Park.

A Science Park is an organization managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions (International Association of Science Parks, 2010).

To meet these goals, a Science Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities (Luis Sanz, 2001).

This definition, encompasses not only the different models currently existing in the world, but also other labels and expressions such as Technology Park, Research Park, Technopole, Technology Precinct, Learning Village, Science City etc.

In other words, the real “stars” of the STPs are companies, businessmen and entrepreneurs. STPs are there to support them, and they will also serve and benefit their entire communities and societies.

In Portugal, Science Parks and Technology Parks are recognized only as SPs. As it is explained on the article, the main role of the Science Park in Portugal combines both concepts. Despite the role and mission from the Portuguese perspective, it corresponds to the international concept of STPs.

On the other hand, the concept of Business Incubator is complex and ambiguous. In the article, it shows directly how diverse are concepts of the different BIs concept in the world or even inside Portugal.

In general, the Business Incubators are recognized for providing comprehensive support to the companies in their startup stages of development, helping entrepreneurs through the most difficult time of their business career. Incubators provide facilities and service, for example, business planning and legal, accounting, and marketing support to catalyze small-business growth Business incubators, as economic tools, have become increasingly common in the last decade and a half for stimulating local development (Paul Gatheru 2009).

In other words, the Business Incubator is designed to assist businesses to become established and profitable during their beginning period. Comes from individuals interested in promoting an innovative idea that they have so that it becomes a business, yet they may have no competences or skills in business. Consequently they need to learn more to change the concept into business, they need to have clear documented business concepts based on an innovative idea they already have but which again may not be converted into business due to resource constraints.
The history of Business Incubators started during the 80s, in the United States. The main goal was to create tax-exempt organizations that could select startups with bargain rents, equipped offices - often renovated with public funds - management assistance, and connections to funding.

In terms of conditions, Incubators give starting businesses inexpensive space to rent, shared office support such as telephone receptionists/secretaries, office services and equipment such as photocopiers, technology support services, financing assistance, and most important, other people who are in the same situation of starting their own businesses (Clint Johnson 2010). In the United States, about 87 percent of the companies that graduated from an incubator since the 1970s are still in business. Furthermore, during their stay in the incubators, these companies recorded an average sales increase of more than 400 percent. It is estimated that in their relatively short span of existence, North American incubators have created nearly 19,000 companies that are still in business and more than 245,000 jobs. Nowadays, more than 400,000 entrepreneurs start new businesses in the US yearly. 350,000 of those new businesses close their doors before the end of the year. Comparing this disturbing number to the success of new companies in business incubators, we state that more than 80% of the incubated companies are profitable within two years and are still doing business by the end of five years.

Regarding the Business Incubators in Portugal, the article shows that the business project is directly linked to a start-up company. In the Portuguese economy, which has the one of the lowest GDP/capita of the European Union, any contribution goes directly to the increase of the added value in the country. This was the first idea to regionalize this concept in a country with a low level of economic activity.

During the 80s and 90s different concepts were created. However, until today, as is it explained in the article, Portugal has a huge difficulty in creating new businesses. With this reflection, the authors will try to find the best way to measure the success of SPs and BIs.

3. Methodology

The methodology used was a written survey combined with a semi-open phone interview. The main idea was to investigate the success of the SPs and BIs based on the performance references.

The survey was to collect and benchmark vital information about the Science Park and Business incubators sector of the Portuguese economy. The information is critical in assessing the business incubator sector and in developing programs to support them.
The methodology allowed collecting data about the activities and benefits of SPs and BIs. Aspects to be covered include affiliation, infrastructure, sources of funding, policies, clients and activities, services, impact, management, and barriers.

The data collected illustrates the poor results that SPs and BIs had given to the Portuguese economy. In contrast to the United States of America, where the concept is more mature and consistent with the results, the Portuguese case according to this article is weak and shows multiple fails.

4. Performance of SPs and BIs

As SPs and BIs share the same role and mission, the article focused on the performance analysis to measure their own success and impact.

From the literature read by the authors, they defined the University links and suitability of management as the most important for the success of SPs and BIs. The importance of both is irrefutable.

University links allow economic agents to create and innovate new products and services. The relevance of Research and Development investments (R&D) is crucial to respond directly to the market demand and follow the “fashion” needs. Suitability of management, on the other hand, facilitates the ability to measure the consequence of the spin-offs, their own strategy, mission and vision.

The schematic representation of the research model illustrates the University links and Suitability of Management to achieve the success of the SPs and BIs and in consequence the Job and Wealth creation was too simple and direct.

The Portuguese problem is not to create a successful impact in the economy from SPs and BIs, being this a more complex scheme.

The underlying factors for the success of BIs and SPs, the suitability of management and the University link, limited the success of the article. Once the article is focused on these two factors, it was possible to explain which characteristics have each Science Park and Business Incubator. The variety of the characteristics demonstrates how important is the communication between SPs and BIs in Portugal. However, we cannot see the concrete number of the employees and added value created from each SP and BI in the article.

If the relevance of an SP or BI is to create job and wealth creation, why doesn’t it have a concrete system to measure the flow and get the results? Why isn’t there any entity to track the success of each SP and BI?
Nowadays, in the beginning of 2011, it would be interesting to create an demanding Balanced Score Card of Added Value created in Portugal. If Portugal wants to increase the GDP/capita and create sustainable value, the economic agents have to feel the responsibility, passion, commitment and ambition to achieve it. Once the main responsible for a SP or BI shows non-availability to answer a simple survey or to attend a phone call from the authors to show their own work, it gives a perception that he is hiding his own situation and doesn’t need any external support. This mentality is totally unacceptable and can’t be part of a responsible of any SP or BI.

The openness to show our experience to the competition and partners, even the most failure or successful one, is the great beginning to demand our capability to do more and better. (Rafael Garcia, director of the successful Business incubator “Ingenio” in Montevideo, Uruguay 2010).

5. Conclusion

To create a successful business, we just need to have a good product or service and good customer. We can only have good products or services or customers, if we respond directly to the market demand.

Basically, the current globalized market requires the right product and service at the right time. If the Science Parks and Business Incubators in Portugal are not prepared to follow the market and to provide new differentiated products and services to get new customers, it will be difficult for the Portuguese economy to create a new global company with differentiation.

The flow of the article started with the concept and characteristics of the SPs and BIs. With a defined and direct questionnaire, the authors’ goal was to look for concrete performance results. Without any relevant result, the conclusion of the article was unclear and undefined: “In Portugal, the contribution of SPs and BIs to job creation and economic growth is barely visible and modest.” After reading the article, the number of added value and job created on each SP or BI was not defined.

This conclusion refers to a new investigation around this topic. Not only to update the results of each SP and BI, but mainly to find a concrete flow of job and wealth creation. The idea of an economic Balanced Score Card is to achieve better jobs and higher wealth creation is necessary, essentially in a converging country as Portugal.

Balanced Score Card should have the critical success factors to get a higher number of jobs and wealth. These critical success factors should be linked to each other and focused on the wealth and job results. Each key factor of success should be associated to more than one key performance indicator.
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