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**Academic Business Incubators as an institutional
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Abstract: The Academic Business Incubators are a significant investment in the development of academic entrepreneurship in Poland. They put the emphasis especially on local development. They are the driving force and a source of motivation to take up new challenges for young people. They allow ambitious people to combine their theoretical knowledge acquired during their studies with practical knowledge. Thanks to the Academic Entrepreneurship Incubators young people become professionals in their actions. Their acquired skills, knowledge, physical, moral and mental characteristics are an excellent basis for the development of their business. The aim of the paper is to discuss the essence of academic entrepreneurship and present issues of the Academic Business Incubators functioning as an institutional form of academic entrepreneurship development in Poland.

Introduction

In Poland, academic entrepreneurship is relatively a new phenomenon and rarely used for the development of economic activity. The literature of the subject points to a number of barriers limiting, and often preventing economic activity of the scientific community. They are, in particular, the inadequacy of formal and legal arrangements, limited access to financial resources and the assistance of highly qualified executives. Another barrier is the risk associated with the specificity of the market for intellectual property, problems with the estimated value of a product, the formal description of the market, as well as the clarity of property rights. The development of academic entrepreneurship is conditioned by many factors.

This applies in particular to problems of the science, research and education sector, which is the source of research and development, skilled workforce, training opportunities, as well as potential entrepreneurs among staff and students. The development of local environment for innovation and entrepreneurship also plays an important role, consisting of small and medium-sized enterprises, entities offering specialized business services, and potential customers of offered products and services. Particular importance in this respect gains a support system, including institutions, organizations and various assistance programs. These are science parks, technology transfer centers, technology parks and incubators of academic entrepreneurship. One of the entities which enables the connection of business with the functioning of universities are the Academic Business Incubators whose mission is to support economic activity of the academia - students, doctoral students, staff and graduates of universities and combating unemployment and commercialization of tangible and intellectual goods. The aim of the paper is to discuss the essence of academic entrepreneurship and present issues of the Academic Business Incubators functioning as an institutional form of academic entrepreneurship development in Poland.

Methodology of the research.

The research methodology is an analysis of the literature of the subject within the scope of academic entrepreneurship and analysis of documentation on the practical aspects of the Academic Business Incubators in Poland.

The essence of academic entrepreneurship in Poland.

Entrepreneurship of the academia is understood in two ways. A popular and the most common approach is the recognition of academic entrepreneurship as any kind of involvement of research institutions, academics, auxiliary staff and administration, doctoral students and students in business activity (Drucker, 1992). On the other hand, “academic entrepreneurship” is defined as business activity in the field of education and its practical support for people connected with the research. This concept has a career in the whole world. It is also known by other names such as “innovative entrepreneurship”, “technostarters”, “intellectual entrepreneurship” and “technological entrepreneurship”. Besides, for the

companies established by universities there are terms used such as: a university spin-off, company off campus, professors' companies and small technology business forms (Banerski et al, 2009, p. 6).

According to L. Pasieczny and J. Więckowski "the essence of entrepreneurship is a set of specific characteristics of people and organizations, of which the most important are creativity, sensitivity to change, searching for and implementation of innovation, willingness to take risks and responsibility. At the same time, entrepreneurship is reflected in the actions of individuals and organizations, for which, however, favorable conditions in the organization and its environment are necessary" (Pasieczny&Więckowski, 1981, p. 136).

J. Guliński emphasizes that academic entrepreneurship can be understood in three ways (Guliński, 2000, pp. 2-4):

- as, on the one hand, any kind of involvement of the university, its students, doctoral students and staff in business, on the other hand, as the creation of companies by employees, students and doctoral students;
- as a channel of knowledge and innovation transformation, through the establishment of businesses by representatives of the academic community (on a campus or nearby), or the transfer of knowledge and innovation for a fee or free of charge;
- as the transfer of technology and innovation, which can occur via licensing (implementation) agreements, patent sales, services and expertise to the world of the economy, sharing of databases and library resources, services of the staff and research contracts ordered by the economy.

The evolution of the traditional functions of higher education, the creation of second and third generation university, which is described by J.G. Wissema in his work, the emergence of hard budget constraints and the need to make the best use of structural funds have caused the appearance and then increased academic entrepreneurship. Accordingly, J.G. Wissema concludes that in the search for different solutions, designed to enhance innovation of enterprises and bring scientific communities closer to the realities of the economy, academic entrepreneurship seems to be an attractive field for experimentation and testing. A university is assigned to a new role. Today, in the knowledge-based society it serves not only the role of a teaching and research center, but it is also seen as an institution with abundant source of new ideas, thoughts, research, which can often be used to start a new business. Not using these possibilities would be a waste of the country's economic development potential (Wissema, 2005, pp. 11-18). The use of knowledge, scientific achievements, skills and ideas emerging at universities in their own business is characterized by a certain degree of

risk. Young entrepreneurs have to bear the costs associated with establishing and running a business from the very beginning. What is needed is considerable knowledge of procedures and legal issues related to starting and running a business. Additional barriers that may arise are issues concerning property rights, or difficulties with evaluation of results of scientific achievements. Therefore, in connection with the abovementioned difficulties in the initial phase of operation of the business, academic entrepreneurship should undergo some protection, called incubation. Business incubators are able to provide such a protection. The necessity results not only due to the reasons mentioned above, but also as the research indicates that the inventor, innovator and entrepreneur are often different people, and only in exceptional cases they have all the features together, as it was, for example, in the case of Edison, Bell, Eastman, and Dell. Students and researchers of non-economic faculties are focused mainly on the use of technology to create new products and services and not on the rules related to financial or market issues (Wissemma, 2005, pp. 11-12).

Hood and Young developed theoretical principles within which competencies for success-oriented entrepreneurs need to be developed, namely: the content, skills and behaviour, mentality and personality (Hood J.&Yong J., 1993, pp. 115-135).

Matusiak indicates that another important matter related to defining entrepreneurship in the scientific community, there are issues: whether entrepreneurship is to be primarily “incubation” of entrepreneurs and businesses, or “incubation” of know-how having a potential market value, and incubation of projects, business concepts, supporting enterprises such as a *start-up* (Matusiak, 2009). These approaches are inspired by a radically different philosophy and completely different bases. The former is based on the hypothesis that it is possible, with a minimal support, to increase the number of stable in a market and competitive knowledge-based firms. The latter assumes that it is only possible to support a process of conceptualization of business projects in an organizational and financial way, while they are forced to find external financing themselves. The authors in this case have three solutions (Skweres-Kuchta, 2007, p. 159):

- the sale of certain projects to institutional investors;
- bringing them as their contribution in the company-funded by “business angels”;
- the creation of venture capital funds which are minority shareholders in these companies.

According to K.B. Matusiak, academic entrepreneurship is programmed “creative destruction” and its implementation requires a “specific bastion” created by (Matusiak, 2006, pp. 110-111):

- the sector of science, research and education which supplies the market with results of market research, skilled workers, and flexible training opportunities of potential entrepreneurs from the students and faculty members;
- the support system which consists of programs and institutions that support the transfer of technology and the development of the initial phases of the company;
- the local environment of innovation and entrepreneurship, which consists of small and medium-sized enterprises, specializing in business-related services, and risk financing institutions (*venture capital*).

The abovementioned elements as a consequence of interdependence and merging (i.e. a synergy effect) create conditions for the development of economic activity. Through networking based on the infrastructure and institutions soft actions are developed, causing considerable interest in finding ideas for new products and technologies.

J.G. Wissema rightly points out that recently there is an increasing importance of “knowledge” as a production factor, activating the development of new forms of cooperation between science and the economy. Hitherto existing model of scientific institutions, especially of higher education, based on education and scientific is extended by preparations for entrepreneurship (Wissema, 2005, pp. 21-39), understood as the development of creative activities that will enable independent operation in the market. Thus, the challenge for the scientific and educational institutions become, according to him, the following (Wissema, 2005, p. 21-39):

- shaping attitudes open to entrepreneurship and self-employment among staff and students;
- development of knowledge and technological and organizational solutions for the needs of the market and small and medium-sized enterprises;
- management of intellectual property;
- entrepreneurial management of higher education;
- initiating partnerships and networking relationships with local business.

In such an environment a trend is created known as “academic entrepreneurship” or in other words economic activity of academia.

The interest in the economic activity of the academic community has a number of sources. According to K. Matusiak and K. Zasiadły, they are included in: (Matusiak&Zasiadły, 2005, pp. 145-148):

- activities related to the commercial transfer of new ideas from science to the economy; here a model “inventor-entrepreneur” turns out to be particularly effective, allowing to adapt systematically to new solutions for the market and consumers' expectations;
- increasing innovative pressure, resulting in shortening the time of transition from the idea to the market application (a first-mover advantage), which is the cause of the spatial approximation of a business and a scientific institution or a university, a scientist and an entrepreneur; innovation increasingly becomes a product of the environment in which an entrepreneur operates (the innovation environment);
- an increase in the search for new forms of revenue raising of universities and research institutions by streamlining the channels of communication and cooperation with business, resulting in the sale of technology and research services;
- a stronger need for enhancing the attractiveness of educational offer by preparations for the practical use of acquired knowledge in own company;
- an increasingly demanding market, creating a difficult obstacle to overcome for ambitious graduates; self-employment is a relatively simple way to break the deadlock in this regard.

The main element of academic entrepreneurship are (as already mentioned) people with certain rare competence. M. Skweres-Kuchta emphasizes that such entrepreneurs are characterized or should be characterized by (Skweres-Kuchta, 2007, p. 160):

- inventiveness and perseverance in finding and solving problems;
- openness to cooperation and self-improvement of managed organization;
- the ability to see contact points between knowledge, technology, and often hidden market needs;
- the ambition to run one's own life, passion, vision and dreams.

Donckels recognizes the increasing awareness of entrepreneurship as a career option as a major determinant of development activities in the field of academic entrepreneurship (Donckels, 1991, p. 35-42).

Next S. Kwiatkowski indicates the following desirable characteristics of entrepreneurial behaviour (Kwiatkowski, 2000, pp. 24-26):

- diversity of knowledge, contacts and opportunities – an intellectual entrepreneur is able to associate simultaneously in multiple environments, spheres and worlds, which brings a unique opportunity to develop and deepen the knowledge and expand relationships that constitute a potential base for expansion;
- the ability to integrate the process of collecting, selecting and processing information and the ability to make decisions, the ability to synchronize the work simultaneously in different phases of the decision-making process, which makes it possible to avoid the deposition of certain information, assumptions, hypotheses and evaluations;
- possibilities for global action, containing extensive contacts and frequent movements, which increase the ability to identify and seize the opportunities;
- the ability to find oneself in the right place and time, and to identify changes in the environment, which makes it possible to determine the actions that bring the expected results;
- identification of the role in business as an intellectual challenge and adventure, making it possible to maintain a certain distance to the role, which is a lasting source of inspiration;
- attachment to ethical and employee development issues.

Since, as it was assumed, academic entrepreneurs are those associated with universities and other organizations active in the field of the science and research and development sector, that is, academics, students, doctoral students and everyone interested in the commercialization of acquired knowledge, it is obvious that these people shall undertake the following types of activities within the business activity (Grudzewski & Hejduk, 1997):

- development of new products, technology, organization and management systems or their improvement;
- adaptation of the results of research necessary to implement the license;
- introduction to business practice of patents, utility models and improvement schemes, as well as the design and implementation of innovation.

D. Trump claims that entrepreneurship starts with a vision, without it nothing significant is developed. What is important, however, entrepreneurship is not a genetic characteristic, and this means that it can be learnt. According to D. Trump, by one's own will, skills, knowledge, and own strength people themselves influence the course of events in their

lives. These are the features that one can develop and then improve in practice (Trump, 2009, pp. 19-21).

According to Berkhout, an entrepreneur is seen as an entity bearing the risk arising from uncertainty. However, in order to reduce the uncertainty of income from self-employment, it is more and more associated with the regular part-time work (Berkhout et. al., 2010).

The development of an entrepreneurial attitude is always a very individual matter, but in the economy there are a number of divisions and types of entrepreneurship. The external and internal entrepreneurship can be distinguished. The external entrepreneurship is addressed to our environment, we have to deal with it when we are developing our own commercial venture. The internal entrepreneurship occurs when we use our characteristics and skills needed by the company, a team of people we work with.

In business practice, the company is treated as interpersonal. The predominant view is that it is a system that develops and aims at a fixed target, while improves itself. The system "enterprise" is purposeful, self-organizing and self-regulating. It provides stability and adaptability necessary for the survival and development. It is a complex system with an internal organizational structure, open, which interacts with the environment through the exchange of personnel, tangible assets, and information. It is a part of a higher order system - the regional, national, European, world economy. It is dynamic and changes over time (Moczyłowska & Pacewicz, 2007, pp. 16-17).

Gibb, on the other hand, recognizes the role of small and medium-sized enterprises in supporting the process of maintaining management of entrepreneurial attributes of young people by providing standards, role models and insight into independent business processes (Gibb, 1987, pp. 42-47).

Academic Business Incubators and the development of academic entrepreneurship in Poland.

Since the mid-twentieth century, the research centers and universities have been more actively involved in the process of creating conditions for the development of academic entrepreneurship. The growing importance of knowledge as a factor of development of economic activity gives the abovementioned institutions a new role in the economy and dictates new way of their functioning. The development of new forms of cooperation between the science sector and the economy has occurred. Universities

engage themselves substantively, organizationally and financially in activities developing innovation of regions, researchers undertake their own businesses, and curriculums are constructed in such a way as to enable students to acquire practical skills needed in the management of companies (Richert - Kaźmierska, 2010, p.12).

The Act on Higher Education of 2005, as amended, inscribed academic entrepreneurship as the main activity of universities in Poland. It specifies that in addition to conducting research and education of students, universities are obliged to cooperate with the economic environment, in particular through the sale or free transfer of results of research and development for entrepreneurs and promote the idea of entrepreneurship in the academia, in the form of economic activity separated organizationally and financially. The best known and at the same time most widely used institutional forms of creating and supporting academic entrepreneurship in Poland are the following (Richert - Kaźmierska, 2010, p.13):

- Career Services Centres;
- Academic Business Incubators and Pre-Incubators;
- Centres for Technology Transfer;
- Science and Technology Parks.

The main focus of university career services centers, operating at Polish universities since 1993, is to support intellectual and professional development of students as future employees. The scope of their activities include, inter alia (Internal materials..., 2014):

- creation and maintenance of databases of job offers in the market;
- conducting trainings and workshops aimed at developing skills for job search;
- developing and maintaining contacts with employers and job agencies;
- individual and group career counseling.

In contrast to these activities, the task of the Academic Business Incubators is, above all, to support economic activity of the academic community or university staff and students who are entrepreneurs. The Act on Higher Education allows two forms of the functioning of the Academic Business Incubators:

- as university-wide units, acting on the basis of rules approved by the university senate;
- as commercial companies or foundations whose activities are governed by the relevant legal documents.

The former (an Academic Business Incubator as a university-wide unit) allows an academic center to exercise direct control and supervision over activities of the incubator. In this form, there may be difficulties at the

moment of starting a company in the course of business activity, because according to the adopted solution, the university should act on behalf of the incubated companies. It often happens that universities provide a third party with a usable area, which, although it is relatively the easiest solution, it significantly limits the privilege to influence the activity of the incubator. The best solution is acquisition of the part of the shares by the university in the company running the incubator, which not only allows it to derive financial benefits, but also provides the university with the opportunity to exert direct influence on the function.

“An Academic Business Incubator is a unit managed by the university in order to use better the intellectual and technical potential of the university, offering support for economic activity of academia, university staff and students who are entrepreneurs.” (The Act on Higher Education of 27 July 2005 (Journal of Laws No. 164, item. 1365 as amended))

The history of the Academic Business Incubators functioning as the ABI Foundation dates back to 2004. They derive from the Students' Forum Business Centre Club, established in 2000 with the largest organization of employers in Poland – the Business Centre Club. At a rapid pace, the Academic Business Incubators have become one of the largest student organizations in Poland, bringing together 15 regional offices. Currently they have 48 branches located at universities throughout the country.

The Academic Business Incubators have contributed to the creation of more than seven thousand new businesses so far. Currently, a significant share of these companies become leaders in their industries, achieving a market success, including Goldenline, Photoblog, Highclass, Apeiron, Beds.pl, Chomikuj.pl, Space Technologies, RoboCamp. There are companies that took their first steps in the Academic Business Incubators. They currently employ several thousand people and obtain revenues in the hundreds of millions of PLN. At the end of 2010, there were 1,431 companies operated in the Academic Business Incubators, with more than 3,000 people employed (Promotional materials, 2014).

The network of the Academic Business Incubators in Poland is the largest network of incubators in Europe, which at the turn of the last few years gradually increased the number of its branches.

One important aspect of creating economic activity of academia in Poland is a project implemented by the Academic Business Incubators called “The Path to Entrepreneurial Poland”. The aim of the project is to develop and implement a combined system of creating of academic entrepreneurship in Poland in the form of interacting with each other institutions, such as: the Academic Business Incubators and the Academic Business Incubators Business Links. The main objective of the project is to create a system of pre-incubation - incubation, containing pro-innovative

services for people starting business activity and testing their ideas within the Academic Business Incubators and incubation services for young companies, especially technology companies that have passed the pre-incubation phase, benefited from the Academic Business Incubators and can go to the incubation phase obtaining appropriate assistance in incubators Business Links. An important issue is the fact that the project “The Path to Entrepreneurial Poland” is directed mainly to people from the academic community that do not have registered business activity or conducting already registered business activity and looking for a possibility to use incubators.

The Academic Business Incubators have achieved so far the following successes (Promotional materials, 2014):

- the network of 48 incubators at universities located throughout the whole Poland,
- the largest network of the ABIs in Europe,
- incubators have released on the market more than 5,000 companies so far,
- more than 1,600 companies operates currently in the ABIs.

A person called the beneficiary running a company within the Academic Business Incubators is provided with the following services (Promotional materials, 2014):

- bookkeeping for a company,
- comprehensive legal assistance,
- access to office space,
- the possibility of obtaining funds for the operation of the company,
- a number of training courses, improving the efficiency of company management,
- expert care,
- assistance in creating the company's brand.

Functioning within the framework of the Academic Business Incubators allows to obtain other types of support, including:

- the right to use the trademark of the Academic Business Incubator,
- assistance in promotion and advertising, with the help of marketing agencies,
- organization of business meetings and assistance in finding business partners,
- organization of conferences, trade fairs to promote companies in the ABI.

According Ciborowski „A system of innovation can, therefore, be regarded as an institution which boosts innovation and shapes its nature. It includes the following constituent parts: science and technology system,

education, research and development, and innovation policies. These have to be effectively supported by economic policy instruments whose efficiency directly translates into the performance of a particular innovation system” (Ciborowski, 2014, p. 58).

Sachpazidu-Wójcicka claims that „Considerable changes occurring in the world of economy indicate a transformation of the traditional economy into the economy based on knowledge, which relies on the highly processed products and advanced technologies. The level of the process advancement to the economy based on knowledge results in the competitiveness of particular enterprises, regions and countries. Innovativeness belongs to the primary sources of gaining competitive edge. The rhythm of creation and deployment of innovations decides on the competitive edge of Polish industrial enterprises. Companies search for the competitive edge in various areas of activity such as marketing, production, research and development, as well as in the management field. Moreover, the effective management of the processes of innovations deployment seems to be of cardinal importance. Innovative enterprises have to be distinguished by the ability of efficient deployment of innovations in terms of product, process, organization and marketing methods. The experiences of strongly developed countries prove that innovative enterprises are preferred from the level of their internal effectiveness and positive influence on the dynamics of economic development. Furthermore, business companies, in order to survive on the market and increase own competitive edge, have to improve their innovativeness” (Sachpazidu-Wójcicka 2014, p. 94).

Conclusions

Academic entrepreneurship in Poland has low development dynamics. The Academic Business Incubators have a significant impact on improving the situation in this respect. In order to properly develop business activity of the academic community a long-term strategy should be developed, whose aim would be to determine the future direction of development of this process. An important fact is also the selection of appropriate tools and instruments that are used to initiate economic activity throughout the academic community. The Academic Business Incubators provide opportunities for the development of economic activity of the academic community in Poland, providing the possibility of implementing innovative ideas in an autonomous or assisted business activity, they are an

opportunity for effective transfer of knowledge and technology to the economy in terms of creating start-ups.

The Academic Business Incubators (ABIs) functioning as a foundation were created in 2004. Their task was to organize an innovative network of business incubators the ABIs at universities across Poland. As a result of the ABI Foundation's activities in Poland, the first and the largest in Europe network of institutions was established, providing support on the basis of Pre-incubation and Incubation of business ideas. This success in addition to the involvement of a group of young people could be achieved mainly because in the ABI an innovative on a European scale model of pre-incubation was developed. In contrast to similar European institutions it is based not only on hiring a usable area, but most of all on the opportunities to run the company on the principle of division of the incubator without setting up one's own business. A newly established venture is backed by a profiled ecosystem of services, in which anyone can start every business in the easiest, fastest and least risky in Europe way. Incubators the ABIs were already awarded in 2005 the title of The initiative of the Year, and in 2007 were nominated by the Government of the Republic of Poland to the European Enterprise Awards. On 15 May 2012 during the European Economic Congress the Polish Agency for Enterprise Development awarded the first prize to the Academic Business Incubators in the category "Innovative business-related institution". In 2013, the ABI Foundation was nominated for the prestigious RegioStars 2014.

The AIP Foundation offers a unique path to comprehensive support for entrepreneurship at the stage of initiating and developing one's own business activity in Poland and abroad, with the participation of universities and business partners. The AIP permanently cooperates with start-ups for which the acquisition of external financing in order to implement the results of R & D and technology transfer is an essential part of their development. In this aspect, the AIP is currently one of the largest and most important institutions for Polish entrepreneurship. As part of the current activity, it has created a few dozen initiatives, which were attended by more than 100,000 young people, there were more than 5,000 companies established and thousands of new jobs created.

The AIP Foundation is currently implementing its vision through 3 key initiatives:

- Academic Business Incubators - the largest in Europe network of business incubators (now 40, ultimately in 2015 - 50), which are places where one can in the quickest, cheapest and least risky in Europe way test own business idea in real market conditions. Currently, about 1,600 start-ups per month test their business ideas within incubators.

- ABI Seed Capital – an innovative seed fund investing in the best Polish start-ups. The Fund offers the easiest and most effective system of investing in Polish start-ups. In addition to the funds, the ABI Seed Capital also provides mentoring guru of start-ups, access to the second round of investment, including the participation of investors from the Silicon Valley. The ABI Seed Capital has made so far 49 capital entries in innovative companies each time in the amount of not less than 100,000 PLN for 15% of the shares. Further 84 investments will be made by the end of 2015.
- ABI Business Link – the network (ultimately in 2015 – 10) of the world's top business development centers for start-ups. As part of a preferential package comprehensive services are available to customers, allowing to conduct a business in a simple and effective way from anywhere in the world. In addition, the offer includes comfortable workplaces, modern conference rooms, meeting rooms with multimedia facilities and networking spaces. A showcase of the ABI Business Link are Laboratories which are a unique place, conducive to creative work. Currently, about 200 start-ups per month use the services of Business Link.

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