

STUDENTS' ENTREPRENEURSHIP AS AN EXTERNAL EFFECT OF HIGHER EDUCATION INSTITUTION ON THE CASE OF STATE SCHOOL IN BIAŁA PODLASKA

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Abstract. *Entrepreneurship at the university, may be recognised both in the group of teachers/researchers and among students. Students' entrepreneurship is an important form of external effects of educational activity of the university. The aim of the paper is to define the predisposition of students of State School of Higher Education in Biała Podlaska for entrepreneurship activity during studying. Second aim is an assessment of the ability of the school to create the framework and conditions for academic entrepreneurship. Sources of information for research were subject literature, official documents and information from the school and own survey among students. Research results show that academic entrepreneurship is rather poor and reasons for that are on both sides – dissatisfied students' attitudes to business activity and weak school support for these external effects of educational activity. Investigation proved that there are large areas for improvements.*

Keywords: *academic entrepreneurship, external effects, State School of Higher Education.*

Introduction

The term "entrepreneurship" appeared first in modern times, at the turn of the XVIII and XIX centuries during the industrial revolution. It has been the subject of discussion in various schools of economics. There are many definitions of entrepreneurship related to theoretical concepts in economics, and to the functioning of various socio-economic systems. Neoclassical economists like J. Schumpeter and A. Marshall described entrepreneurship as the fourth production factor, next to land, labour, and capital as well as a source of innovation (Białasiewicz, 2008). They greatly contributed to the development of entrepreneurship theories. I. Kirzner described entrepreneurship in market processes as discovering the unknown possibilities in a market by an entrepreneur. Entrepreneurship can be described as (Janasz, 2004): - a set of features and behaviours which determine the occurrence of an enterprise, and are realized for a set purpose upon the assumption of limiting the risks; - a kind of human activity,

an activity which is observing the environment in search for opportunities and using them to realize certain ventures that provide economical and non-economic effects; - a process, that leads to creating a new and valuable thing, with a certain degree of financial risk, the effect of which is personal and financial satisfaction.

Entrepreneurship is a subject of interest of economics, psychology, sociology, law, management sciences, and other fields. It can be examined in various aspects, as innate or acquired, individual or team related, independent, financial, social, local, and others. (Klonowska-Matynia & Palinkiewicz, 2013).

A particularly important aspect that relates to the subject of this article is intellectual entrepreneurship that is based on knowledge, innovative entrepreneurship and academic entrepreneurship. Academic entrepreneurship is equated with a wide array of business activities of various scientific entities that is based on intellectual property (Wyrwa & Sołtysiak, 2016). Next to academic entrepreneurship, which relates to scholars' activity at universities and research institutes, there is also student entrepreneurship; students, apart from their main goals of acquiring knowledge, abilities and social skills, take up a side business activity that is oriented toward making money, increasing qualifications, and preparing oneself for an earlier and more effective entry into the job market. Development of student entrepreneurship can be treated as an outside effect of studying and acquiring a certain profession through receiving a certain diploma.

The purpose of this article, on the example of the State School of Higher Education in Biała Podlaska, is to show students' ability to starting business activities, and to show the means through which a school of higher education may foster the growth of entrepreneurship - both academic and student entrepreneurship.

Basics, essence and the form of academic entrepreneurship

Historically, we can distinguish three generations of universities. The first generation was higher education in the Middle Ages, whose representative was the University of Bologna, established towards the end of the XI century. This university's role was to educate with politically influenced knowledge. The second generation was born at the beginning of the XIX century, through actions of Wilhelm von Humboldt, who established a university in Berlin, In 1809 Humboldt's model of a higher education school was quite autonomous, allowing for freedom of science and unrestricted teaching and voicing of opinion. The main goal of the universities was the development of science and advancement of theory that generalized the diversity of practical fields. This generation lasted until the second half of the 50's of the XX century, when American and English universities turned toward economic practice, which spawned the Anglo-Saxon model. This third generation model combined classical teaching with teaching

professions through practical classes (Poznańska, 2014). In the XXI century, the constant technological progress, changes in national and international markets, globalization, growth of the economy based on knowledge, and above all, the rising importance of knowledge and intellectual capital in business, has contributed to more reforms in higher education. We can say that universities of the fourth generation have been established.

The European integration played a large part in how the modern universities were formed. The marker for the scientific transformation of universities in Europe is the Lisbon Strategy and Declaration, and the Bologna Process, as well as Europa 2020 programme (Brendzel-Skowera, 2016). The above mentioned documents are meant to improve the quality of education and growth of economy based on knowledge, which should be facilitated through increased research spending, development and innovation (European Commission, 2010). These actions show that the universities can be a resource of economics that promotes innovative economy. However, in Europe, some noticed the so-called "European paradox" - high level of research does not translate into the ability to adapt technology to the market or to an organisation (Matusiak & Matusiak, 2007). This phenomenon has caused years of delay of the European economy in comparison to top countries of the world. Noticing this paradox and outlining the aforementioned strategy was meant to form the European Research Area as a unified open area for the world, where knowledge, science, technology and scientists can move around freely and use the innovative potential present in the employees and scientific institutions.

In the USA and in England, the new generation of universities has focused on active support of entrepreneurship in people related to the environment of free universities, who cooperate with their environment, and particularly, with businesses (Piecuch, 2013). An important part of this process was the development of private financing (Tamowicz, 2006). In Europe, the economic potential in the cooperation of universities and businesses was also noticed, which led to the formation of a new kind of entrepreneurship - "academic entrepreneurship". One can see the beginning of this phenomenon in the activities of some American universities, like the Stanford University and Massachusetts Institute of Technology. Good examples of linking a university with economy and a market, primarily through using private funds, can also be seen in other American universities of the new generation, like Yale or Texas University, which became famous for their technology incubators (Frączkiewicz-Wronka & Wronka, 2012).

A university of the new generations should prepare its students for fostering proactive behaviour that facilitates autonomous action in the market, and even shapes the development of a region (Brendzel-Skowera, 2016). The universities of this generation, which endeavour to achieve a strong place internationally in the teaching and research markets, benefit from commercialization of their

research, cooperating for the environment to gain significant benefits (Tokarski, 2010). An entrepreneurial university, its entrepreneurial and innovative approach is an institution that links academic culture with the market culture, and is an important link of cooperation between business and government structures. A modern university is becoming an important element of the network economy, which can be considered a new stage of the growth of economy based on knowledge (Makiela, 2017).

Academic entrepreneurship is entrepreneurship of the academia through research organizations, scholars, associates, administration, postgraduates and students being actively engaged in business (Frączkiewicz-Wronka & Wronka, 2012). It is taken up not only in universities but also in their close environment. In this process, research and potential of research organizations transform into goods and services that directly or indirectly increase the benefits of the customers, and develop local, regional, and national economies. Activity within academic entrepreneurship is split into two aspects: institutional and personal. The optimal scenario is when those two forms supplement each other (Kurowska-Pysz, 2015). Figure 1 presents the elements which the phenomenon of academic entrepreneurship comprises.

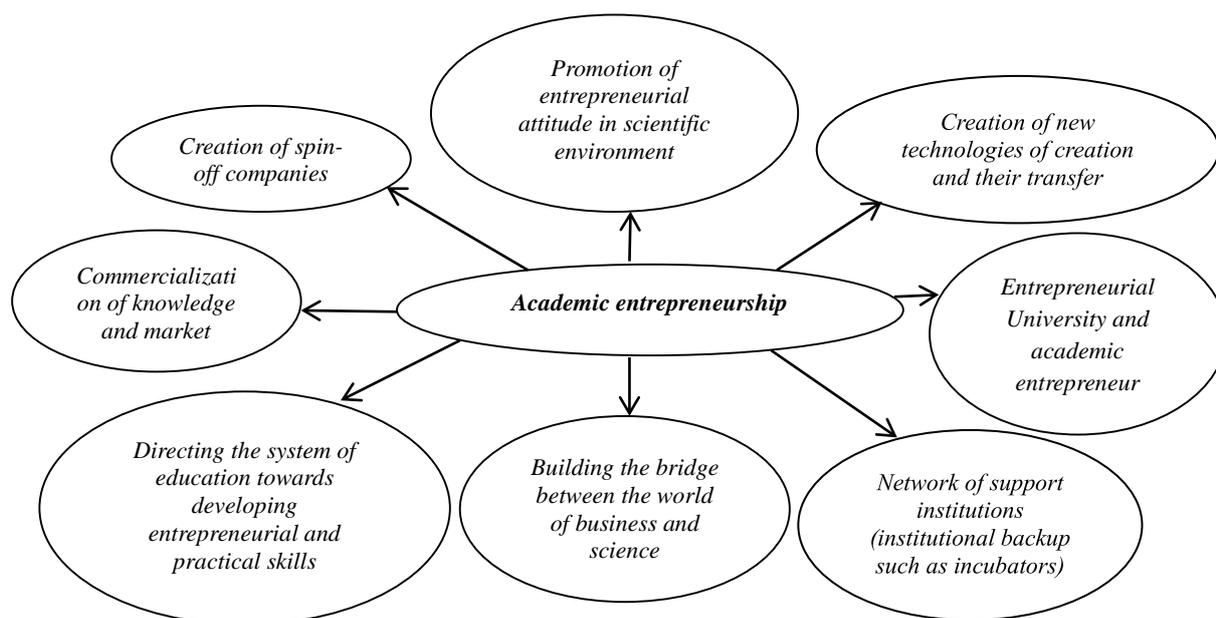


Figure 1 *Main elements of academic entrepreneurship* (Szacillo, 2018, 91)

The benefits of academic entrepreneurship depend on the form of cooperation of the university with business and its environment. The most advanced form of cooperation is the formation of clusters, and within them, spin-off companies and supporting organizations are the leaders. Gains from academic entrepreneurship are received by the beneficiaries to which the academic

institutions belong, teachers and employees of the university, businesses, students, graduates, and government organizations (Bryła, Jurczyk, & Domański, 2013). The academic entrepreneur should introduce new and unique products to the market, as well as services, patents, licenses, technologies, and new organizational solutions. Academic entrepreneurs are also called intellectual entrepreneurs, as their driving force is knowledge and intellectual capital made by the employees and students. An important form and an effect of academic entrepreneurship is student entrepreneurship. Through teaching, universities shape students' attitudes, among which there are personal courage, belief in won abilities, creativity, problem-solving skills (Smogula, 2013). Appropriate study programmes and their practical direction, equipping universities with modern equipment, pro-business attitudes and actions of academic teachers, and skilful use of the educational offer by the students, play a large part in the growth of student entrepreneurship.

In Poland, the legal groundwork for the growth of academic entrepreneurship has been initiated by the Act of Higher Education of 27 July 2005, which contained the following clause: "universities cooperate with the economic environment, particularly through sale or free transfer of research results and studies to businesses, or through spreading entrepreneurial ideas in the academic environment in the form of business activity, separate organizationally and financially from the university. The amended Act of 18 March 2011, Act on Higher Education, introduced a new form of university engagement in the active economic cooperation through commercialization of research results. The new act points not only to the necessity of economic cooperation but also social cooperation," particularly when it comes to running research for economic entities in separate forms of business, including the process of forming a special purpose entity (...), as well as the involvement of representatives of employers in devising educational programmes, and in the teaching process".

To better use the intellectual and technical resources, and research results the universities may create new instruments of technology transfer, such as the academic technology incubators or centres of technology transfer. The issue of academic entrepreneurship has also been introduced to other legal acts regulating the cooperation of science and economy. The government has noticed the importance of knowledge, science, and new innovative technologies, and it has endeavoured to create laws for these corporations. The formulated basics expanded the field of activity and interaction with the economic/social environment of a traditional university and it implemented academic innovation into the economy, which made Polish schools of higher education more like the universities of III generation (Guliński & Zasiadły, 2005).

The laws should be followed by actions that increase the number of spin-off companies, people actively working from the academic environment, the amount of money designated to research and development, the number of implemented

ideas, patents, organizational projects, technologies, and other innovative solutions. The Polish universities focused on following the universities of other countries, especially in opening new faculties, which significantly increased the enrolment rate in higher education but did not translate into a wide application of theoretical knowledge in the economy. The search for a new organizational model for the Polish economy and the struggle to increase entrepreneurship of the academia resulted in the new Act of 20 July 2018 known as "The Science Constitution". The new act says that "research in universities should not only provide knowledge of basic phenomena but it should also be applicable to getting new knowledge and skills, help create new products, processes, or services, or significantly improve them. Concurrently with research, universities should conduct development works, understood as activity comprising acquiring, connecting, training, and application of available knowledge and skills (...) to plan production and to design and create changed, improved, or new products, processes or services". According to the report of the Polish Board of Business, which includes almost 400 universities, in 2016 there were 5600 companies connected with science (Śledziwska, 2017).

The State School of Higher Education in Biała Podlaska, as an entity in academic entrepreneurship

The school has been in operations since year 2000 as one of the 36 state vocational schools. Initially, it offered education only at the first stage of bachelor studies, but with time, it started offering also engineering studies and master studies. During the years of population boom over 5000 students studied there, and at present, the number of students approximates to 3000. The school offers education within 18 majors and, for many years, apart from didactic activities, it has also been performing scientific and research activities as well as informative activities within two faculties - Faculty of Economics and Technical Sciences and the Faculty of Health Sciences and Social Sciences. Large part of its academic staff, which amounts to about 200 people, is engaged in research led in two modern research centres. Highly rated activity of the school, both in the field of didactic and scientific activities, has led the school to take the first place among state vocational schools in a nationwide ranking, and this place has been maintained for the last three years. Both faculties obtained a high category in parameterization of higher education schools held in 2016 – category A was granted to the Faculty of Economic and Technical Sciences and category B was granted to the Faculty of Health Sciences and Social Sciences. At school there is a considerable amount of foreign students from Belorussia, Ukraine, other European countries, Asia and Africa. The school also offers Academic Centre of Vocational Education, Children University, middle school, high school,

University of the Third Age, many postgraduate studies, different forms of professional trainings. Academic publishing house issues three quarterly research papers, monographic and conference publications. Career office, connected with section of students' work placements, supports the school's academic entrepreneurship. The mission of this entity is also to be an academic adviser to students and graduates, activate and shape the skills considered to be useful on the labour market, and to help in making first professional decisions as well as to inspire personal development. The school offers open lectures, meetings with business representatives, open trainings and workshops developing social skills, work placements and internships. Cooperation with labour market institutions is also offered. For several years the school has led, in cooperation with National Polish Bank, economic and business education for students and teachers of high schools from the region, called League of Young Entrepreneurs. The school houses ten student research groups and many cultural and sport groups. Students and teachers actively take part in the European Program ERASMUS. Variety of projects, directed at supporting of employees' and students' competences as well as increasing position of competitive school at the country and international level, are continuously realized at school.

Participation in the following projects co-financed by EU during years 2014-2020 has been crucial for the development of academic entrepreneurship:

“Efficient career office as a guide to labour market” the goal of which is to prepare certain number of students to enter the labour market by their participation in enhanced service offer of entities in terms of professional marketing and coaching, as well as improving professional competences of employees.

“I require from myself – new competences of didactic staff at PSW” a project directed to didactic staff of the school and aiming at increasing of the level of their modern competences in terms of didactics, IT, foreign languages, which will increase the quality of the conveyed knowledge, enhance the effectiveness of learning program and adjusting it to the needs and expectations of students.

“Between the University and employment”, the main assumption of which is to provide competences in terms of communication, entrepreneurship, IT, analytics, and others to more than 200 students of economic majors so that they could meet the expectations of the employers of the local labour markets.

It can thus be claimed that the school in Biała Podlaska has undertaken a series of multidirectional steps to approach the level of the university. It has also undertaken certain steps towards the development of academic entrepreneurship. Apart from the school as an institution, the main role in making these efforts real is played by students and the personnel. We assume that the research regarding the students' entrepreneurship will shed a new light on this important line of development of the school.

Academic entrepreneurship of the school in the students' opinion

Empirical research regarding students' entrepreneurship at PSW was held in the first half of 2018 and the research was organized for a 100-person test group of students. The research regarded the entrepreneurship as a phenomenon, the question of self-employment and academic entrepreneurship. In this article, the thematic range was limited to academic entrepreneurship solely. The test group was selected with the use of random, simple selection method. The technique of individual questionnaires was applied and it could be filled out by any student or graduate, regardless of their major. The questionnaire was accessible on the website docs.google.com. It was elaborated and analysed by M. Szaciłło, which she later used for writing her M.Sc. thesis. (Szaciłło, 2018).

The aim of the research was to search for the answers regarding the professional experience of the students, their attitude towards possibility of establishing their own business, ability to use the available offer of higher education in order to succeed in business, dependence between the attitude of the entrepreneur and respondent and their undertaken steps leading to self-employment. Also, the evaluation of the school's activity in the field of supporting students in gaining competences and succeeding in the area of business activities was performed, as well as the general evaluation of the level of academic entrepreneurship with regards to fulfilling the criteria of the third generation university. Students were also asked about the knowledge of the local labour market. In this paper we present only students' opinions on the academic entrepreneurship. In general, it can be claimed that the results of the research do not fill us with excessive optimism.

The result of the questionnaire is a statement that students themselves block or hinder their own development, since 47% of the questioned students do not use and do not participate in the opportunities offered by the school, and 38% use the opportunities from time to time. Only 15% of students regularly participate either in school's offers or events initiated by themselves. If this questionnaire was to be treated as a representative one, this would mean that in year 2017/2018 only 450 out of 3000 students could be considered as active in terms of entrepreneurship. Only the fact that over 1100 students show periodic interest in entrepreneurial activities is consoling.

The most popular form of students' activity is organizing school events and participation at school conferences (Figure 2). Over 23% the questioned students took part in realization of these tasks. Participation in the work of science clubs appreciates also significant interest. About 20% of the questioned students attend these clubs. Such a good result is influenced by the relatively large amount of science clubs, engagement in their work of the didactic staff members, attractive forms of activity of the clubs and publishing a collection of papers presented

during conferences. Activities that 4-5% of respondents take part in are sport activities, conferences outside of the school and additional activities, mainly regarding improvement of the language skills or marketing skills. Small part of respondents has been engaged in the work of student council, dance section or international cooperation in the ERASMUS project.

Among the variety of possible institutional forms of starting the entrepreneurial activity, students most often choose the school's Career Office. This institution was mentioned by almost 38% of the respondents. Career Office located at the school realizes job counselling, especially in the scope of soft skills, for which the EU funds are applied. High number of indications (between 7 and 9 per cent) was also given to regional and local training and consulting centres, research centres and scientific information centres. One of them is the Regional Centre of Research and Development located in another school in Białą Podlaska, the Centre of Entrepreneurship and Civic Activity in Białą Podlaska, the Development Foundation in Białą Podlaska, the Centre of Entrepreneurship Support in Białą Podlaska. Students are also aware of the activities of academic and municipal business incubators or technological parks. These pointed out between 5 and 7 percent of respondents. What is, however, worrying is that 17% of the respondents did not notice during their classes any kind of institutions supporting entrepreneurship. Despite many efforts made by the school, significant amount of forms of support offered by it remains unnoticed or underestimated. Only 9% of the questioned students definitely confirm existence of such support and 26% denied that the school helps the students in gaining features and skills of an entrepreneurial person. 19% did not have an opinion on that case, while 46% claimed that some forms of support are offered by the school, but they cannot describe what forms in particular. These opinions place the school in rather not positive light. It seems, however, that the passive attitude towards the entrepreneurial activity of the students themselves is not without significance, given the fact that while not being interested in business activities during the studies, the students do not acknowledge the school's offer of entrepreneurial development. Nevertheless, the respondents, when asked how they imagine possible forms of help offered by the school, enumerate series of suggestions which should be taken into consideration by the school in the process of shaping of academic entrepreneurship (Figure 2).

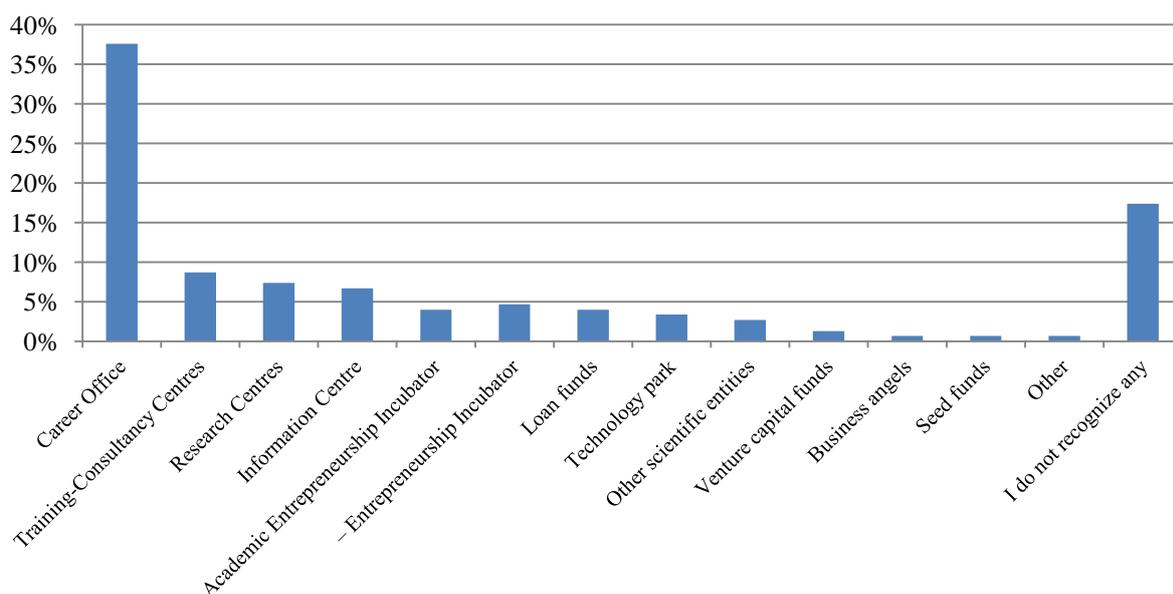


Figure 2 *Institutional forms of academic entrepreneurship perceived by the students* (Szacillo, 2018, 174)

The respondents indicated the need of organization of trainings and workshops ending with certificates, classes and courses realized in companies, paid internships and meetings with representatives of business and employers. The attention was also directed to the need of assistance from lecturers in establishing own business, including creation of the business plan, filling out the application for funding, preparing variety of documents which an active entrepreneur encounters. Attention was also paid to the need of greater efforts of the school in creating spin-off companies. A quarter of the questioned students did not have any idea for introducing any kind of improvements or proposing any kind of interesting forms of activity, and 4% of questioned students did not see the need for any kind of change. Nevertheless, certain interesting suggestions of entrepreneurial activities were proposed, the introduction of which should be taken into consideration.

Conclusions

1. Entrepreneurship is an indicator and measure of active attitude of students and teachers. Schools and teachers, preparing students to enter the labour market, may play an important role in building the students' entrepreneurship.
2. The school may play an important role in development of academic entrepreneurship, in which process both students and school staff take part. It is important, on one hand, whether and to what extent is the school prepared

for creation of academic entrepreneurship, and on the other hand, if the students are active and express willingness to use the potential of the school to create entrepreneurial attitudes and skills to practically use them.

3. State School of Higher Education in Biała Podlaska, while building the modern didactic base and science and research facilities, and while offering innovative practical program of the studies, undertakes activities in fields of developing academic entrepreneurship which cannot be yet treated as advanced compared to Universities of Third Age.
4. Students covered by the questionnaire do not fully use the opportunities provided by the school and its staff in order to develop entrepreneurial attitudes and implement entrepreneurial activities. Small number of students undertakes full-time employment or other forms of work during their studies. Generally, the students have a poor orientation about the local labour market and incomplete knowledge of the forms of help that they can get at the school. An important role in building entrepreneurial attitudes may be played by smart, well organized didactic and educational process, directed at stimulation of students' professional activity.

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