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SUPPORT OF INNOVATIONS THROUGH IMPROVEMENT OF REGULATORY FRAMEWORK FOR HIGHER EDUCATION IN UKRAINE

It was investigated the main directions of forming well-educated persons provide functioning of competition national economics. Using European experience, it was defined, the most important platform of new ideas' conceptions is high school, where the students can realize their projects and transform them from theoretical idea into profitable business one. It was substantiated actuality to introduction of European experience of support of innovations through improvement of regulatory framework for higher education for Ukrainian education system.

Key words: modern globalization processes, European education system, theoretical knowledge, innovations, profitable business, real customers.

Досліджено основні напрями формування високоосвічених кадрів, які забезпечують функціонування конкурентоспроможної національної економіки. З огляду на європейський досвід визначено, що найважливіша платформа формування нових ідей – вища школа, де студенти можуть реалізовувати свої ідеї та трансформувати їх із ідей теоретичних в прибутковий бізнес-проекти. Обґрунтовано актуальність упровадження європейського досвіду підтримки інновацій шляхом вдосконалення сучасної структури вищої освіти для української системи освіти.

Ключові слова: сучасні процеси глобалізації, європейська система освіти, теоретичні знання, інновації, прибутковий бізнес, реальні покупці.

Исследованы основные направления формирования высокообразованных кадров, которые обеспечивают функционирование конкурентоспособной национальной экономики. Опираясь на европейский опыт, было отмечено, что самой важной платформой формирования новых идей является высшая школа, где студенты могут реализовать свои идеи и трансформировать их из идей теоретических в прибыльные бизнес-проекты. Обоснована актуальность внедрения европейского опыта поддержки инноваций посредством улучшения действующей структуры высшего образования для Украины.

Ключевые слова: современные процессы глобализации, европейская система образования, теоретические знания, инновации, прибыльный бизнес, реальные покупатели.

Introduction. High quality of education is one of the most important question all over the world. In the conditions of the modern globalization the education system must realize the modern business tendencies.

Statement of the problem. Scientific works of many foreign and Ukrainian authors elucidate the problems of mixing and conversation between businesses, high school and innovation. P. Altbach, R. Atkinson, S. Marginson, P. Aghion, A. Pavlenko, L. Antonyuk, N. Vsykova, D. Ilnytskyi, A. Nyameschuk and others [1-6]. These scientific workers discussed the main problems of globalization and the role of high school in this process.

Moving power of modern economics is innovations. The platform of generation and growing up of new ideas is a high school. European experience is evidence of truthfulness this position. Real business must know where it can take new ideas for its development. Besides that, the modern conception the European high school is the students make new working places by themselves through improvement of innovations. For explaining of this conception, it is very interesting to analyze Lund University experience.

Results. The Lund University is one of the oldest university in the world (est. 1666). There are 48000 students / 7200 staff and 2200 courses / 285 programs in it. Comprehensive – provide education and research in engineering, science, law, social sciences, economics and management, medicine, humanities, theology, fine art, music and drama. Research oriented – ranked as of the top-100 in the world. Large research facilities, e.g. European Spallation Source (ESS) will be the world’s most powerful neutron source.

Characteristics of the Swedish university system:

- state owned universities (except three universities: Chalmers, Jönköping, Stockholm School of Economics);
- large variety of universities: From large research oriented universities to small regional university-colleges;
- teachers exemption, i.e. university researchers (not the university) have full ownership rights to inventions from their research results;
- new university law in 1992 (law 1992:1434) including the "third mission" for universities, that is universities should cooperate with surrounding society and utilize research results outside the university.

The Lund University entrepreneurial eco-system’s got its history of development:

1) early commercialization successes:

- Tetra Pak (1951);
- Gambro (1964), Bricanyl (1966), Nicorette (1967).

2) creation of IDEON Science Park:

- Axis (1984);
- Oatly (1990);
- Proviva (1991);
- Qliktech (1993).

3) university Law – Third Mission:

- TTO – LUAB (1994).

4) LU Strategic Plan:

- CIRCLE (2004);
- SKJCE (2012).

5) ESS and MaxLab4.

The process of inculcation of innovations in the high school had taken about 25 years old. As a result the Lund University have created the structure of entrepreneurial eco-system. It has the following characteristics (tabl.1).

LU entrepreneurial eco-system: success factors and problems.

1. Success factors are :

- Successful role models.
- University law from 1992: Third mission.
- Strong infrastructure incubators, actors supporting entrepreneurship, etc. built over decades.
- Strong support from the university and its management.
- Collaboration between university and private actors (IDEON).

2. Problems:

- Strong academic values and incentive system – commercialization not a key issue for most researchers at LU.
- Lack of entrepreneurship knowledge among students and researchers.
- Difficulties to close-down organizations and activities → too many organizations and a fragmented eco-system.

Table 1

Characteristics of the LU entrepreneurial eco-system			
	Early stage ventures	Established businesses	Total of app. 35 actors
Students	FENA, Black Pearl, Venture Cup	LUAB, Agro Food, Mobile Hights, Teknoseed, Venture Capital, Business Angel Networks	
Researchers	LUIS, IDEON Open, Venture Cup, Connect Scania, Cleantec, Colloidal Resources, Qnano, Innovation Bridge		
Incubators	Venture Lab, IDEON Innovation, Life Science, Bioincubator, Cleantec		
Seed	Start-up	Early development	Growth

It was illustrated the completely strategic structure of the LU entrepreneurial eco-system. It's very important the working mechanizm of this system.

Demola project is one of the LU entrepreneurial eco-system key department. It functions usingco creation and open innovation through multidisciplinary student teams working with challenges from the society.

Demola project's main aim is to transform theoretical ideas into profitable project. The Roles of Demola project are to allow communication between theoretical base, business and real customers (fig. 1).

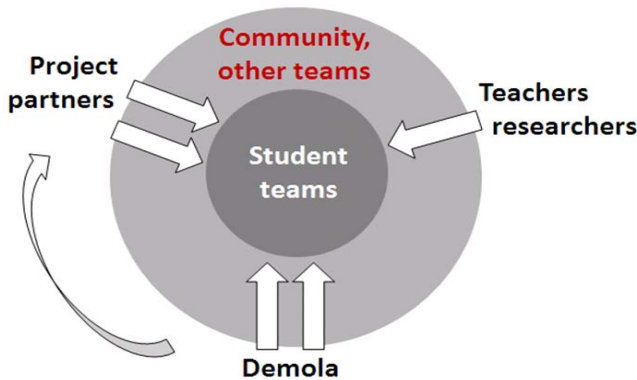


Fig. 1. The Roles of Demola project

1. Teacher researches provide:
 - supporting the students with expertise knowledge;
 - examiner.
2. Project partners provide:
 - contact person;
 - support with company specific information and tools;
 - participation in pitching events.
3. Demola:
 - facilitator;

– administrating Demola course (application, hosting workshops and pitching events).

Pitching events have one of the lead positions in the generation of innovations. The essence of the matter is the students who has an interesting idea can introduce it publicly. The presentation lasts a minute. Then the discussion begins. Everybody, who wants it, can take part in the discussion, acting different roles (as an investor, a customer, from optimistic and pessimistic points). In response to everybody's minds, the reporter has some time to correct his project presentation.

During the second act of the pitching events, students presentate impoved description of their ideas. In the end of these publical discussions an independed expert, counting all strong and weak positions of every presentations) decides who's won. The winner gets money bonus and some stimulus to develop his idea. Nobody knows, maybe exactly this project will be become into a real profitable business plan.

Using such practic in the Ukrainian high school, it allows to activate the innovation generation processes. What'll increase the level of national education competition.

In the modern economic conditions of the strongest competition, real business oftener and oftener needs fresh ideas to get profit. Therefore, Demola can help it. Company can contact with Demola using the following scheme:

- sign contract with Demola.
- contact person 1,5-2 h per week including pitch events.
- challanging the students
- support with company specific information and tools.
- participation in pitching events
- if the company after evaluation find the project result useful, the company can

buy a non-exclusive license to the result (licence cost spring 2014 is 20 000 kr).

Poland high school is connecting to the innovation processes for 5 years. Gdansk University of Technology started realizing the innovation program "Horizon 2020".

"Horizon 2020" is the biggest EU Research and Innovation program ever with nearly €80 billion of funding available over 7 years (2014 to 2020).

'Framework programs' (FPs) have been the main financial tools through, which the European Union supports research and development activities covering almost all scientific disciplines. FPs are proposed by the European Commission and adopted by Council and the European Parliament following a co-decision procedure.

"Horizon 2020" needs to move to a knowledge society and to become a more competitive and sustainable economy; to pursue those objectives the UE; should carry out activities to implement research, technological development, demonstration and innovation. This research program should support all stages in the research and innovation chain (including non-technological and social innovation and activities). Synergies and interactions between "Horizon 2020" and the European Structural and Investment Funds (fig. 2).

Rules for the Protection and Use of Intellectual Property are very important question. Gdansk University of Technology is committed to providing legal protection of intellectual works created in research and supports initiatives to transfer knowledge and technology from academia to the business environment.

Gdansk University of Technology provides special protection of creators/inventors by:

- establishes friendly procedures for filing internal (domestic) applications,
- provides professional support in preparing patent documentation and patent proceeding,

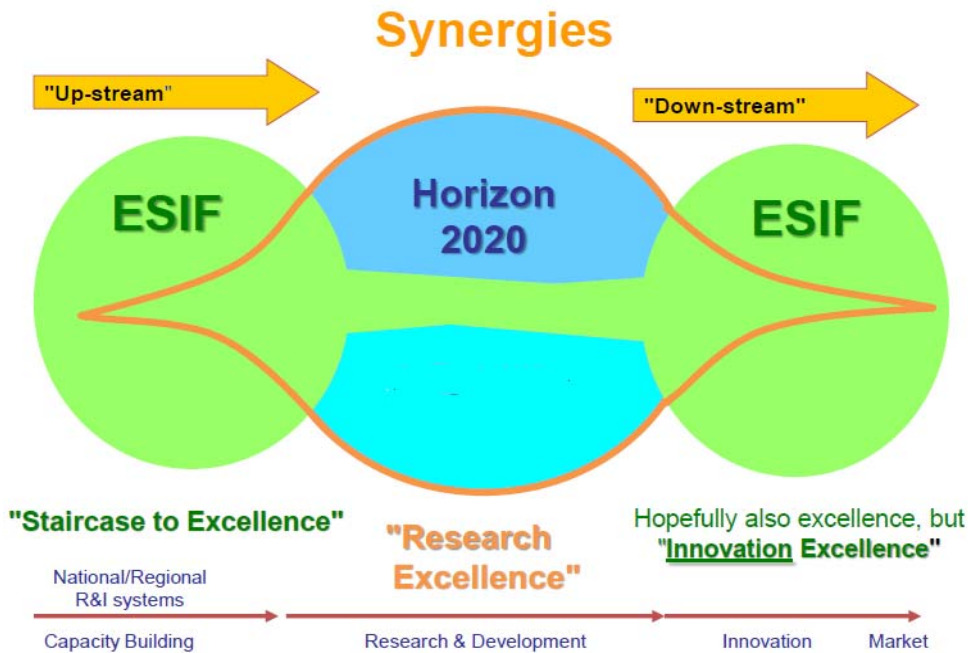


Fig. 2. Synergies and interactions between “Horizon 2020” and the European Structural and Investment Funds

- promotes all actions of academics whose goal is to transfer the solutions to the economic environment,
- establishes rules for access to the results of intellectual work and to support the commercialization process,
- determines fair compensation for inventors whether the commercial use of the results of intellectual work brings financial profits,
- takes into account the implementations in the periodic evaluation of scientific output.

This scheme works in a following way: without profit and profitable (fig. 3,4):

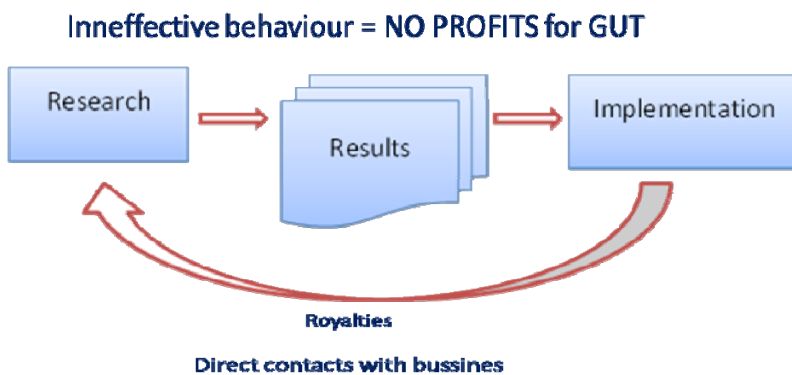


Fig. 3. Direct contacts with business (no results)

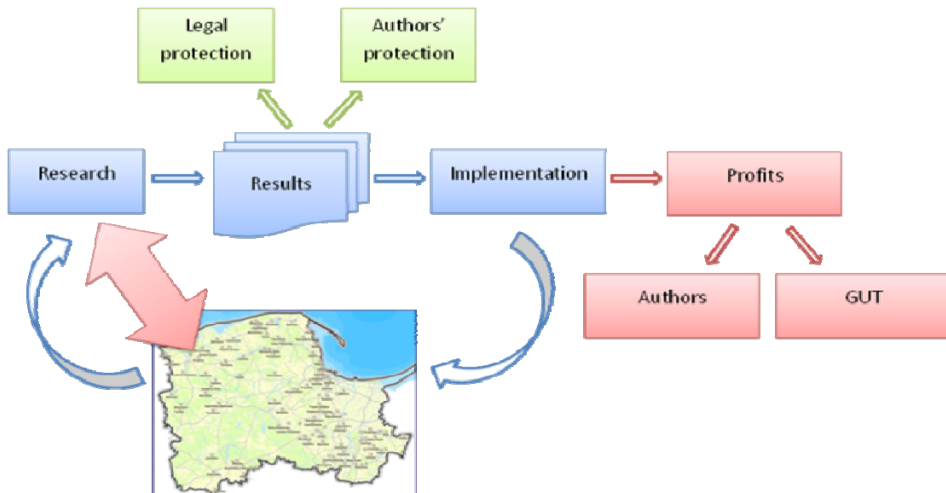


Fig. 4. Direct contacts with profitable business

Therefore, the innovation could be an additional resource to get profit for high school.

Conclusion. Development process of European education system has already had the 25th years of history. This experience like the practice's shown is rather successful. The incubators are made on the University base allow realizing new ideas, creating new working places, increasing level of the national economics' competition.

Now days Sweden and Polish government finance innovation another saying its future because profitable business is a guarantee tax-paymaster. Without any doubts, this European experience of realizing innovation through improvement of regulatory framework is actual for higher education in the Ukraine.

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КОНЦЕПЦІЯ РОЗВИТКУ ЦИФРОВОЇ ЕКОНОМІКИ В ЄВРОСОЮЗІ ТА ПЕРСПЕКТИВИ УКРАЇНИ

Визначено поняття цифрової економіки та проаналізовано базову концепцію її розвитку в ЄС. Досліджено тенденції розвитку цифрового підприємництва, виявлено позитивні тренди у розширенні сфер цифрової економіки в ЄС. Ідентифіковано принципи відмінності у специфіці розвитку елементів цифрової економіки у країнах ЄС та Україні. Запропоновано ключові напрямки трансформації регуляторного середовища для досягнення найбільшої ефективності та зростання цифрової економіки.

Ключові слова: цифрова економіка, платіжні системи, платіжні картки, інформаційно-телекомунікаційні технології, цифрове підприємництво.

Определено понятие цифровой экономики и сделан анализ базовой концепции ее развития в ЕС. Исследованы тенденции развития цифрового предпринимательства, выявлены положительные тренды в расширении сфер цифровой экономики в ЕС. Идентифицированы принципиальные различия в специфике развития элементов цифровой экономики в странах ЕС и Украине. Предложены ключевые направления трансформации регуляторной среды для достижения наибольшей эффективности и роста цифровой экономики.

Ключевые слова: цифровая экономика, платежные системы, платежные карточки, информационно-телекоммуникационные технологии, цифровое предпринимательство.

The article defines the concept of the digital economy and made an analysis of the basic concept of its development in the European Union. There have been studied five dimensions of digital entrepreneurship program, declared in the strategic documents of the European Commission and member states. The fundamental differences and specific elements of the development of the digital economy in the EU and Ukraine were identified. The key areas for transformation of the regulatory environment were proposed in order to achieve maximum efficiency and growth of the digital economy.

Key words: digital economy, payment systems, payment cards, information and telecommunications technology, digital business.