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Managing financial autonomy of a research university

Maksym W. Sitnicki

The aim of the article is to present analysis of the main sources of revenue generation of the world's leading research university – the University of Oxford and one of the best research universities in the United States – Stanford University. Special emphasis is put on their experience and strategy in managing financial autonomy. An effective synergistic model for ensuring the financial autonomy of a research university is described, offering mechanisms for strategic management of the sources of revenue generation. The model is based on the interaction of four key potentials of a research university: functioning of business schools and institutions of postgraduate education; financial cooperation with university graduates; functioning of the independent consulting centers; functioning of the centers for innovative technologies and startups support. The author demonstrates also the model's connections and peculiarities of its functioning and describes, in details, the perspective of its use.

Introduction

The urgency of scientific inquiry for effective models capable of ensuring financial autonomy of research universities is due to the high role of institutions of this type in the development of a modern society. In order to be effective at developing new ideas and advanced technologies, research universities should feel that they have certain academic freedom. Financial liberalization for research-based universities is a completely natural process and it is in line with the European principles of educational and scientific development.

Still, many research universities, especially of the Eastern Partnership countries, are reluctant to opening their doors for opportunities when it comes to earning additional financial resources, an apparent opportunity to develop their material base and invest into research. This is due to the persistent mentality of the authoritarian political past, where additional incomes had always been closely monitored by governmental authorities and have never been considered as a priority component of the principal strategy of research-driven universities.

Purpose and methods of research

The main objective of this study is to develop an effective model for ensuring financial autonomy of a research university. This model is based on the interaction of its elements, capable of supporting a strategic management of revenue sources based on the additional cumulative effect. Proceeding from the goal, the article sets and resolves the following tasks:

- to analyze the main sources of revenue generation of the world-leading research universities – University of Oxford and Stanford University;
- to study their experience and strategy of sustaining their financial autonomy; develop and offer an author's synergistic model for ensuring financial autonomy of a research university, universal for any institution of this type
- to show the mechanism of its functioning.

To accomplish the tasks set forth above, the following scientific methods were used: scientific research and generalization for identifying the main revenue sources of research universities; a modeling method for building a universal model capable of ensuring functioning of an effective mechanism for managing financial autonomy of a research university; the comparative method in the process of analyzing financial resources of the most successful universities of the world class.

Analysis of the literature

The administrative term “autonomy” in the context of educational processes is well defined in the new Law of Ukraine “On Education” as a right of the agent of educational activity for self-governance, which resides in its self-dependence, independence and responsibility in making decisions regarding academic (educational), organizational, financial, staffing and other issues of activities implemented in the manner and limits established by laws of Ukraine (The Law of Ukraine “On Education”, 2017, p. 1). In general, the organizational and legal status of educational institutions provides them with the opportunity to act as a business entity in one of the following statuses: state institution; nonprofit

institution of education; profitable institution of education. Each European state guarantees academic, organizational, financial and staffing autonomy to research universities. The volumes of this autonomy are determined by special laws and regulations of each country separately.

The draft law of the Republic of Poland “On Higher Education” also foresees more opportunities for the autonomy of research universities through the promotion of priority scientific and educational programs and concrete steps toward the implementation of this reform (Ustawa 2.0 – Założenia systemu szkolnictwa wyższego, 2016, pp. 51–52).

The team of authors from the Adam Mickiewicz University in Poznan, one of the three independent research teams that had received grants to develop the principles of the new law (the so-called Law 2.0) and who submitted their projects to the Ministry of Science and Higher Education, has developed a comprehensive draft of changes to the higher education system in Poland. The financial autonomy of research universities has been given considerable attention in the second section of this document. The project states that “The main problems of the public institutions of higher education in Poland are connected with low funding, short financial perspective, that hardly contributes toward financial balance of higher education, strict regulation of the use of funds by sources of their origin and the general lack of university’s financial autonomy” (Kwiek, et al., 2016, p. 112). At the same time, allocation and management of funds bear a lot of risks, such as for example, the risks of non-rational or misappropriate use of funds. These and other issues of this type of risks have already been investigated in scientific research (Zywnak-Dworczak, 2013, pp. 368–381).

At the general level of the European Union regulations and in the Strategic framework – Education and Training in Europe 2020 (ET 2020) in particular, the focus is made on the five key priorities in the development of education, where the role of autonomous research universities for their implementation is principal (European Commission – Strategic framework – Education & Training 2020, 2016, p. 1). EU universities aim toward producing financially literate citizens capable of building a strong economy in their own countries. Moreover, having citizens who properly use financial instruments is also beneficial to research universities, as students intensify the use of credit programs to finance their own education.

The study of an economic and financial literacy of Polish society revealed that Polish citizens demonstrate a low level of knowledge in the fields of personal finances, functioning of financial institutions and foreign exchange markets. Such results are linked with a poor quality of entrepreneurship education in Polish gymnasiums and high schools. The authors emphasize the acute need to make financial concepts understandable to Polish people and to equip them with a competence that will allow them to make informed and responsible financial decisions, thus creat-

ing conditions for more active citizens to participate in the country’s economic life (Kurowski, Laskowska, 2016, pp. 15–23).

The authors proposed a system of relevant criteria designed to conduct strategic analysis and evaluation of a research university’s performance. The criteria allow to impartially present the results of the evaluation while minimizing the level of a subjective component within a set of consolidated results (Zhylińska, Sitnitskiy, 2018, p. 413).

The paper of Wissema (2009, p. 1) presents a comprehensive vision of the modern university and shows the evolution of the university model from the Middle Ages to the present day. Two opposite models are described in the book. In the first one the need for ensuring the autonomy of universities, freedom of science and its independence from the economy are taken for granted. Science is considered as a theoretical activity, and its practical application may only be the addition. In the second model Wissema underlines the importance of close cooperation between science and business.

Furthermore, carrying out research on effective models for ensuring the stability of financial revenues that could establish the autonomy of research universities is an urgent issue requiring further study and development.

Sources of generating the revenues of the leading world-class research universities

University of Oxford

Oxford University, according to the Times Higher Education (THE), is one of the world’s leading research universities (QS World University Rankings, 2018, p. 1). The key financial objectives of the university are to provide the long-term resources to strengthen and prolong its pre-eminent position – nationally and internationally – as a place of outstanding learning, teaching, and research; and to enable it to provide additional support to its three core priorities of students, academic posts, and buildings.

University of Oxford has five main sources of funding:

- the largest source – £564.9m, which accounts for 40% of total income – is the external research funding, from such bodies as research councils, charities, trusts, foundations, and industry. Oxford consistently has the highest external research income of any university in the UK.
- the next 14% come from government grants through the Higher Education Funding Council for England and the National College for Teaching and Leadership.
- other income includes annual transfers from Oxford University Press, income from the commercialisation of research, and philanthropic support (23%).

- academic fees, from both undergraduates and postgraduates are the fourth source (22%).
- and last but not least is the investment income (1%).

Table 1 presents the main sources of income of the University of Oxford for the financial year 2015/2016.

Table 1. The main sources of revenue for the University of Oxford for 2015/2016 financial year

University income	£m
Tuition fees and education contracts	293.5
Funding body grants	192.5
Research grants and contracts	537.4
Other income	213.0
Investment income	8.8
Donations and endowments	74.4
Donation of heritage assets (eg works of art, historical antiquities)	2.2
Total income	1 321.8

Source: summarized by the author on the basis of University of Oxford: Finance and funding, 2016.

According to the Table 1, the main distinguishing feature of the university’s financial strategy is decentralization of its income sources. Such approach allows for a significant funds accumulation and reduction of financial risks. The university’s financial system is constructed in such a way that the Oxford University’s Colleges (apart from Kellogg and St Cross Colleges) are independent, self-governing and financially autonomous. In 2015/2016, the total annual financial contributions (including donations) from 36 colleges amounted to £453 million. The tuition, study, and housing fees made up 42% of the university’s financial income. Donation of heritage assets and just donations received throughout one year combined with the investment income accounted for another 50%. This research university gains a significant amount of its revenues from organizing various events such as: presentations, open lectures of world-renowned people, conferences etc. Creativity and diversity of those activities are really impressive. Meanwhile, the university plans to be engaged in developing strategies that would allow the UK to adapt as much as possible to its future position outside the EU while retaining sources of funding from the EU funds. After BREXIT, the Oxford University intends to maintain strong relations with the EU, participate in the future of EU Framework Programs, and to conduct joint research with the colleagues from the EU.

The total financial expenses of Oxford University colleges in the academic year 2015/2016 amounted to around £389 million. Basically, the funds were spent on financing activities, which included 84% of the cost of training, research, housing and communal services. The balance of expenditure was distributed

between the costs of fundraising, business events such as conferences and tourism, and investment management costs. The University thoroughly plans its expenditures and controls their actual implementation contributing in such way to a high level of financial discipline.

Stanford University

Another university that is worth our attention is Stanford University (SU), USA, one of the best research universities in the world. In 2016/2017 Stanford was a \$5.9 billion enterprise. This figure represents the university’s consolidated budget for operations, a compilation of all annual operating and restricted budgets that support teaching, scholarship and research, including the budgets of all schools and administrative areas and the SLAC National Accelerator Laboratory. It does not include the \$774 million capital budget and excludes the budgets for Stanford Health Care and the Lucile Packard Children’s Hospital. Stanford’s main sources of income are represented in Table 2.

Table 2. Stanford University sources of funds for financial year 2016/2017

Sources of funds	%
Sponsored research	18
Endowment income	20
Other investment income	2
Student income	15
Health care services	20
Expendable gifts and net assets released	6
SLAC National Accelerator Laboratory	10
Other income	9

Source: summarized by the author on the basis of Stanford University: Administration & Finances, 2016.

From the data collected in table 2 it may be derived that a relative share of Stanford University’s financial revenues consists of financial donations that account for \$22.4 billion (as of August 31, 2016), health care services, and sponsored research funding. The Endowment Stanford Foundation is a permanent source of financial support that helps to execute the university’s mission which involves teaching, learning and research. Almost 75% of the grant money is used for achieving a specific goal. Stanford University has more than 8,000 university foundations. Due to the investments, university’s money is always at work. A part of the investments returned from the funds is used to support annual operating expenses, while the rest is reinvested into the endowment to maintain the university’s financial flexibility. In the fiscal year that ended on the 31 of August 2016, the charity gifts donated to the University accounted for a total of \$951. million, which reflects the support of over 80.000 donors. The role of managing investments,

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Stanford University's endowment and other financial assets, belongs to the Stanford Management Company (SMC) that was established in 1991. SMC is a division of the University, governed by a Board of Directors. Stanford University is ever-interested in a formation of additional funds from diversified sources that in the strategic perspective will give it more academic freedom and development.

The development of synergistic model for providing financial autonomy to a research university

In the following section a model developed by the author will be presented. It is aimed at providing research universities with the opportunity to increase their additional financial revenues, adding up to the financing they traditionally receive from the state budgets, profile ministries or other programs. The author's vision of a model (Figure 1.), with key units of a research university functioning in unity, is based on the use of a synergistic effect, most capable of ensuring a high level of university's financial autonomy.

The peculiarity of the synergistic model of financial autonomy of a research university presented in Fig.1 is based on a mutual reinforcement of all of the components of the university's potential. These components are capable of increasing financial revenues and, consequently, strengthening the university's financial potential by achieving a cumulative effect. Such mechanism develops synergistic connections of

various nature and content, undetectable from the first glance.

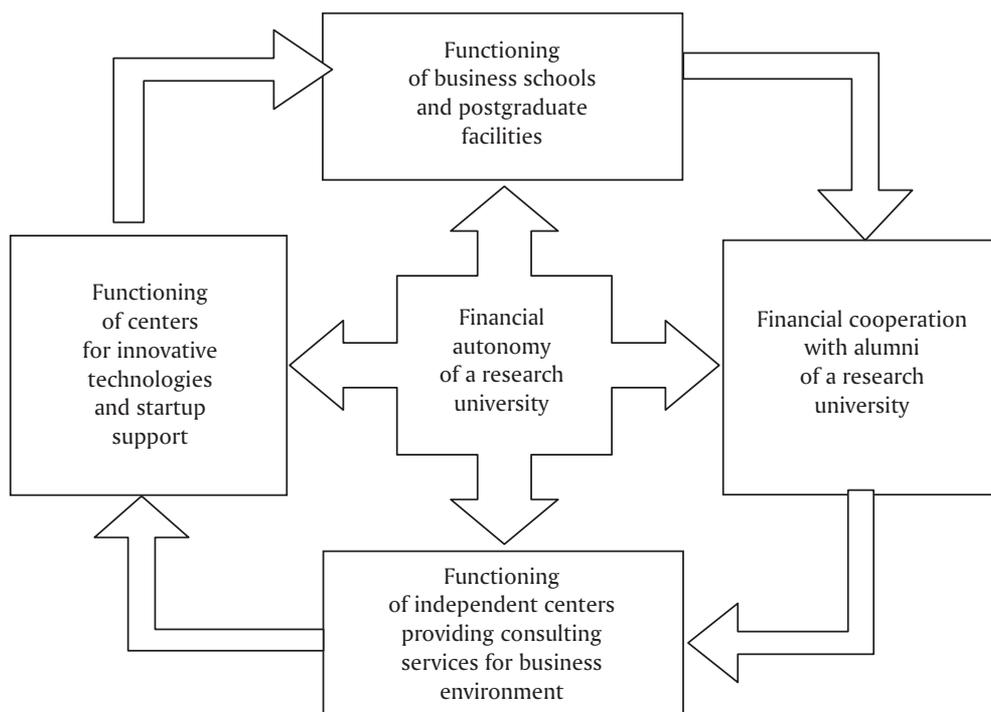
The presented model works on the basis of four components described below.

Business schools and postgraduate facilities

This component gives the research university a unique opportunity for attracting additional funds and build its financial autonomy. Business programs, developed by educational institutions, contribute to a synergistic effect by creating an opportunity for interaction between business program attendees and the institution, what allows for a wide spectrum of mutual support. Besides the revenues that any university obtains from its didactic activity, we focus our attention on additional reserves and potential contributors that allow a higher level of financial flexibility. The fact that tuition fees for business training are quite high creates an opportunity for high marginal income. Undoubtedly, the cost of organizing a studying process and quality training can be significant but, nevertheless, this field has a potential of providing fast and powerful financial revenue source. Many business schools offer their potential students discounts schemes, such as early bird discounts, applying for a bursary or pre-payment refunds. In this way, the research university has its own financial resource, which can be invested in the development of fixed assets or financing of individual studies.

Another possibility of this component is the involvement of creditors offering banking products for those wishing to obtain a business education despite

Figure 1. A synergistic model for providing financial autonomy to a research university



Source: own study.

having no financial resources available. In such a case, a credit institution pays the cost of studying directly to a research university and offers the borrower two education loan repayment schemes: a traditional way of the classical scheme or working for this institution before or after graduation. Thus, a research university receives timely financial resource and a possibility of its immediate use. These opportunities need to be developed as they allow capitalization of knowledge with their subsequent conversion into tangible assets, which in turn provide competitive wages for researchers and improved material base. The process of organizing a recruitment process into business schools of research universities in Italy can serve as a successful functioning example of such mechanism. For instance, Bologna Business School has a mutually beneficial deal with an Italian banking group Intesa Sanpaolo, which involves crediting talented students of business schools on a basis of long-term repayment scheme and low-interest rates. This is advantageous for both educational institution and a prospective university student. Peculiarities of this collaborative model have been brought to light in our other studies (Sitnicki, 2017, pp. 43–49). At the same time, a detailed analysis of the functioning of the 25 best business schools of world's leading research universities was carried out in the study (Sitnicki, 2018, pp. 36–45).

Along with the above-mentioned mechanisms, the world's best research universities have their own schemes for exceptionally gifted people. These, for example, are classical research universities in the United States and the United Kingdom, which have significant self-financing resources that enable them to credit their own students or partly cover their tuition. It may seem strange that a research university would itself pay for the study of the students that it teaches. However, this assumption is premature. The model of financial autonomy developed by the author (Figure 1), enables the implementation of such a scheme based on the use of a synergistic effect. The fact is that the leaders of these research universities have long realized that a student whom they support financially, may bring them even more profits once he graduates the university. This kind of investment is much more rational than investing into tangible properties. Investing in human innovation potential is one of the priorities of American and British approaches to managing the development of research universities and rightly so, these countries have earned themselves the titles of being the most successful leaders in the scientific and technological processes in the world.

Financial cooperation with the alumni of a research university

After leaving the walls of a research university, graduates of business schools and other levels of education begin their own professional life. Many of them become successful businessmen, influential politicians, recognizable scientists, all contributing to innovations in various fields and needs of society. The world of market production has become so competi-

tive nowadays and a scientific progress so accelerated its pace that it becomes almost impossible to dominate the market with the same product. In the history of management, there are many examples of companies that used to lead the market but could not hold their leading position, and in consequence lost their ground or disappeared. The Finnish company Nokia (that used to occupy almost 80% of the world market for mobile phones sales) was unable to develop the innovative potential of its own employees, and eventually, not being able to withstand a technological competition, was forced to lose leadership. The Kodak company could be another good example. Having been the world leader in the production of photographic equipment, it lost its positions in the face of digital technology. These examples emphasize the need for creating a collaborative business environment between research universities and their graduates.

Ordering a research on the invention of a new technological solution for a specific product or process from a business entity is a reasonable and effective mechanism for establishing a cooperation between a graduate of a business school and its educational institution. Such cooperation is mutually beneficial to all three parties. Firstly, a research university receives a financial resource for research and development; secondly, the research is carried out qualitatively and by specialists of the relevant qualification, experienced in this field and recognized by the world scientific community of the professional circle; thirdly, entrusting technological development to research university's specialists, a business structure can focus on optimization and strengthening its business processes, or pay more attention to the marketing promotion of the company's portfolio.

In this respect, endowment should also be given much of attention as it provides a significant financial resource that funds university's activities. For example, University of Oxford has endowments worth about £910 million. Individual colleges have their own funds, which make up for more than £4.1 billion. Such financial stock provides university a high level of financial autonomy.

Independent center for providing consulting services for business environment

Consulting centers operate in almost all research universities in the United States and the United Kingdom. They provide a possibility to practically test knowledge about business environment, its markets and trajectories of their development. Having such a platform, a research university can earn additional income by helping those business structures who, at any given moment of their operation, need immediate consultation. Such university centers provide advice not only at a business level of corporate structures, but also may advise on the level of the whole country on a wide range of issues. The most popular of them are: economic development and effective investment; political transformation in developing countries; conduction of sociological research; development

and formation of human rights; strengthening of democratic values, etc.

As a rule, research university experts have extensive experience in these issues and an impeccable reputation in the field of professional guidance. Therefore, business structures and other clients of consulting services willingly order professional expertise directly from research centers, that provide an independent and authoritative view on a particular business process or phenomenon. An important competitive advantage of consulting services market is the reputation of a research university as an independent consulting establishment.

Center for innovative technologies and startup support

Theoretical studies are very valuable, but their commercialization yields significant income from the introduction of technologies into life. Therefore, newly-created knowledge needs to be effectively broadcasted so it can meet social needs for new technological solutions. To achieve this, innovation technology centers should have two forms of work organization. Firstly, the existing infrastructure and intellectual potential must fully ensure the continuous process of creating new and improving existing technologies. And secondly, an interdisciplinary team of specialists should ensure the “understandable design” of innovations along with a formation of a marketing strategy for their further commercialization through startup projects. This approach has effectively been used by the research universities in the United States and the United Kingdom, bringing significant financial dividends for both the universities and the countries as a whole. Oxford University contributes about 5.8 billion to the British economy and supports more than 50.000 full-time jobs. Oxford’s international image has allowed it to prosper as one of the world’s leading universities, famous for the quality of its studies and research. In recent decades, the UK membership in the European Union has made it possible to make full use of the scientific potential of highly skilled staff and students through the access to EU funding programs and research networks. Oxford University has a large number of international partnerships, staff and students. At present, 18% of Oxford’s staff and 16% of its students are from other European Union countries. In the academic year 2015/2016, the university received £74 million (14% of its research funding) from the EU.

Graduates of business schools of research universities contribute greatly to the financial success of world-class universities which wisely support their business projects. This is being achieved through providing financial grants to young entrepreneurs and groups of inventors for the implementation of their business ideas. They also offer professional counseling in the development of their business plans or forming a strategy of entering the market. Sometimes the product is so revolutionary that in order to ensure its functioning, it requires new markets and infrastruc-

tures to be created. Harvard Business School is ready to allocate funds worth of \$10.000 to those, who will be able to convincingly present the value of their projects. Harvard thoroughly stimulates high-quality entrepreneurial education.

Krawczyk-Bryłka, B., Stankiewicz, K. (2017, p. 42) share Harvard’s strategic education policy, pointing out in their study that *entrepreneurship education is playing an increasingly important role in advancing and shaping the entrepreneurial behavior and competences of the younger generation. In this context, the importance of using new, interactive methods and forms of education should be emphasized as they are extremely important for one aspect of entrepreneurial education, that is, a development of creativity and proactivity.*

Startup support gives a research university the status of an institution that effectively uses its resources to serve the society. This status adds importance to educational facility, and brings significant financial revenues from successful implementation and commercialization of innovative projects. Moreover, the research university, having implemented projects of successful business structures, accumulates its revenues from businesses which have a steady income. Innovation centers are designed to implement large-scale projects based on funding research programs on the national or international scale, such as grants from international networks and associations, etc. The state funding comes in a form of a subsidy to statutory activities, grants provided by specialized agencies, government programs or others.

Scientific activity of the main research university in Poland, the University of Warsaw, can serve as a striking example of how effectively grant money can be used. The university’s academic revenue grew from less than 100 million PLN in 2005 to over 380 million PLN in 2014 (Uniwersytet Warszawski: Fakty i liczby, 2017, p. 1). The University’s research budgets are several times greater than those of other leading Polish universities, confirming its status as the main and one of the most important research centers in the country.

At the first glance the experience of leading research universities in the UK and US may seem inapplicable for many European universities but the intention of the author of this study is to report the need for the aspiration of European research universities to the standards of the highest world level. Globalization processes have long destroyed the barriers to competition and under such conditions, those universities that will have global strategic thinking and strive for the highest standards will survive.

If European research universities do not pay attention now to the search for effective models for ensuring their own financial autonomy, then in the strategic perspective, they will lose their global competitiveness and academic reputation. Such alarming signals can already be observed. While analyzing the first 25 positions of the global ranking (QS World University Rankings, 2018), one can spot that there are six universities which represent the European Union and

they are all British. When the UK finishes the BREXIT process, then on the first page of the global ranking there will not be a single university from the European Union because the next EU university – Ecole Normale Supérieure (France) – takes the 43rd position in that ranking. Therefore, increasing the global competitiveness of research universities in the European Union by increasing the level of their financial autonomy is a critically important strategic task today.

Conclusions

Summarizing the results of the research, we would like to specify that the author's proposed synergistic model designed to ensure the financial autonomy of a research university is primarily based on increasing the reserves of the main potential of a research university that is the employees that they have and the level of competence they possess. Providing the rational use of these opportunities, it is possible to assure a continuous process of additional financial resources to the research university, significantly increasing its level of financial autonomy.

Analyzing the strategy of financial autonomy management at the Oxford University, it has been established that this world-class research university not only adapts to the processes of industrial development but also actively takes part in it, influencing state policies and providing the UK government and parliament with advice on how to strengthen the position of the world-class universities which provide competitive advantages in the fields of education, research and economic growth.

A classic research university has to be internationally recognized for its scientific activity and strive to remain so for the next centuries. Its main strategic benchmarks should be based on:

1. the intention to further involve international staff and students in expanding their influence in the world;
2. support, development and establishment of new links with research universities within the EU and around the world;
3. participation in international scientific networks and associations;
4. close financial cooperation with university graduates;
5. attraction of additional financial resources through functioning of the independent consulting centers;
6. coordinating and conducting joint European projects by uniting in powerful scientific consortia.

Compliance with the data of strategic guidelines ensures financial autonomy of a research university through increasing its financial flexibility. The developed model differs significantly from the model of the third-generation university (Wissema, 2009, p. 1) in that it focuses on synergistic interaction of only four major components that have the potential to provide stable financial returns to the research university. The model

suggests that through an interdisciplinary approach, research universities should introduce courses that go beyond the university program thereby creating innovative training and research products. It is necessary to go beyond the boundaries of the internal environment and form an external environment independently, which will allow the first to establish new rules and conditions.

The proposed model can provide financial success to research universities in Poland and Ukraine, which are now practically simultaneously introducing a new reform of higher education on the basis of new national legislation. These two countries, in the process of working out the effective links of academic cooperation, have a chance to significantly strengthen their positions of global competitiveness in the market of educational and research services. This is justified by the presence of significant intellectual potential, high level of citizens' motivation to strive to improve the level of research and education in their own country and advantageous geographical position in Europe, which allows attracting a large number of students and scholars from the the East and the European countries in particular. At the same time, Ukraine now has great financial support from the United States, the EU and other countries, which allows it to dynamically reform the sphere of education and modernize research universities. The development of joint scientific and educational projects of Poland and Ukraine will allow to effectively use these funds on the basis of the experience of reforms, Poland has already passed on the way to integration with the EU. Such productive cooperation and balanced pragmatic relations of the academic sphere of Ukraine and Poland will provide a high level of financial autonomy for research universities, both in these countries and in the European Union as a whole.

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Management of the financial autonomy of the research university

The article analyzes the main sources of income generation for the world's leading research university in the United Kingdom – University of Oxford and one of the best research universities in the United States – Stanford University. The experience and strategy of managing their own financial autonomy of these research universities have been studied. An effective synergistic model for ensuring financial autonomy of the research university is developed, which provides an opportunity for strategic management of sources of income generation and is based on the interaction of four key potentialities of the research university: the functioning of the business school and institutions of postgraduate education; financial cooperation with graduates of the research university; functioning of an independent center of providing consulting services; functioning of the center of innovative technologies and support of start-ups. Also, the links and peculiarities of the mechanism functioning of the proposed synergistic model are described in detail and the perspective of its use is shown.

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Organizator konferencji, którym jest International Association for Development of the Information Society, jako główny cel wydarzenia wskazuje dyskusję wokół aktualnych problemów dotyczących wykorzystania internetu w różnych obszarach życia. Trzy główne obszary tematyczne obejmują:

- Web 2.0 – koncepcje i metodologia rozwiązań internetowych, w tym sieci semantyczne, służące budowaniu narzędzi współpracy i społeczności sieciowych;
- Architektura informatycznych systemów sieciowych, w tym m.in.: architektura systemów sieciowych, protokoły i standardy, zarządzanie wiedzą i pozyskiwanie informacji, projektowanie interakcji człowiek-komputer, bioinformatyka;

oraz

- Zastosowania internetu, w tym m.in.: technologie internetowe w nauczaniu, zarządzaniu i w ochronie zdrowia, biblioteki cyfrowe, sieciowe systemy obsługi multimedialnych.

W programie wydarzenia przewidziano kilka rodzajów sesji: oprócz tradycyjnych krótkich i pełnych wystąpień oraz sesji plakatowych i warsztatowych, planowane są także (coraz częściej spotykane) „reflection papers” – prezentacje pomysłów na projekty badawcze i zainspirowaniu dyskusji wokół tych pomysłów. Ponadto organizatorzy planują sesję dla młodych naukowców – „Doctoral consortium” – oraz wystawę rozwiązań biznesowych z obszaru zastosowań internetu i sieciowych systemów informatycznych.

Zgłoszenia propozycji wystąpień (w języku angielskim) są przyjmowane do 25.06.2018 r.

Szczegółowe informacje można znaleźć na stronie konferencji: <http://www.internet-conf.org/>