

UDC 351.82:338.24

DOI <https://doi.org/10.32840/pdu.2020.1-2.28>

M. O. Sychova

Candidate of Economic Sciences, Associate Professor,
Associate Professor of the Department of Management,
Public Management and Administration
of Dnipro State Agrarian and Economic University

I. I. Baidak

Senior Lecturer of the Department of Management,
Public Management and Administration
of Dnipro State Agrarian and Economic University

A. I. Plotnitskaya

Assistant of the Department of Management, Public Management and Administration
of Dnipro State Agrarian and Economic University

MODERN PROBLEMS OF INTEGRATION OF AGRARIAN SCIENCE, EDUCATION AND INDUSTRY IN UKRAINE

The benefits of integration for partners are explored. In particular there are integration promotes educational structures – to improve the quality of the educational process, expand the practice ground, raise the standard of research work, etc.; integration promotes the development of scientific institutions that are part of an integrated formation – to strengthen staffing of researchers, to increase the efficiency and quality of scientific developments, to improve patent and licensing activities, etc.

It has been determined that expanding markets is an integral part of the integration process. Formation of new tenants, caused by integration processes, is accompanied by improvement of planning and accounting work through the establishment of financial accounting centers, development of internal economic and commercial calculations.

It is substantiated that conditions of development of integration processes are connected with delegation of authority by state regulators of agrarian sector; delegation of certain strategic and tactical management authority.

The main groups of legal rules concerning the integration of business, science and education are investigated. In particular there are laws, legislation and regulations governing scientific activities; laws, legislation and regulations governing educational activities; laws, legislation and regulations governing innovative processes.

The main negative economic aspects related to the modern development of science, education and business are identified. In particular there are social and economic instability; funding gap; obsolescence and discrepancy of material and technical facilities for the modern needs of scientific and educational activities; a steady decline in the number of young personnel and reducing the number of researchers and teaching staff due to the lack of adequate payment.

Positive tendencies of development of Ukrainian innovative business are analyzed. In particular there are increasing in the number of small innovative enterprises; increasing of domestic expenditure for research and development; increasing the proportion of extrabudgetary funds in domestic expenditure for research and development.

Key words: agrarian science, industry, legislation, integration, education, development

Formulation of the problem. According to world experience, sustainable social and economic development of any state, as

well as its competitive edge in the foreign markets, is ensured, first of all, by the presence of well-developed environment “generation of knowledge”, based on significant sector of fundamental research in com-

ination with effective education system, on the development of national innovation system, on regulatory and legal framework and on coherent public policy in innovation.

Investing into intellectual capital of developed countries is the most effective way of resource allocation. This implies that the development and structure of R&D Ukrainian sector should meet the growing demand from a number of segments of the business sector on advanced technology. World-class scientific findings, offered by the Ukrainian R&D sector, should be applied in the national economy, precondition for this is the susceptibility of the Ukrainian business sector to innovation. The adoption of such documents at the state level reflects the acknowledgement that the highest authorities of our country consider integration processes to be one of the priorities for the state development.

Analysis of recent research and publications. The analysis of specialized literature has shown that many studies of domestic scientists are devoted to the problems of integration of science, education and business. Significant contributions to this issue were made by such scholars as: Pugach A.M., Breslavets T.I. [1], Voytovich N.V. [2], Stolyarov V.V. [3], and Shubravska O.V. [5].

However, today, this problem has not sufficient theoretical grounding and has a number of outstanding practical points that should be outlined and solutions should be found to further develop efficient and rapid integration of science, education, and industry.

The purpose of the article – to outline the current problems of the integration of agrarian science, education, industry, and to develop a set of modern and effective recommendations that contribute to the effective functioning of the system, which merged various spheres of social activity: education, science and business.

Presentation of the key research findings. Integration of science, education and industry is the association of various spheres of social activities into a single integral system, achieving close collaboration and interaction between them, taking into account the common activities, for effective implementation of functions and achieving goals that can be realized by using the avail-

able resources and mechanisms of state regulation [5, p. 63].

In our opinion, there is a number of advantages that integration partners gain. Among them we highlight such benefits as:

1) integrated establishments in comparison with the subjects of education, science and industry, acting on a relatively autonomous basis (separately) may have advantages gained from the state and local administrations (tax breaks, subsidies, subventions, soft loans, leasing supplies etc.);

2) integration promotes educational structures - to improve the quality of the educational process, expand the practice ground, raise the standard of research work, etc.,

3) integration promotes the development of scientific institutions that are part of an integrated formation - to strengthen staffing of researchers, to increase the efficiency and quality of scientific developments, to improve patent and licensing activities, etc.;

4) integration enables the tenants of agrarian sector to improve staffing, to increase the number of young specialists, to run a farm using innovation development, to increase the competitiveness of manufactured products, to become the leader of the industry, etc.

An integral part of the integration process is the expansion of markets. Formation of new tenants, caused by integration processes, is accompanied by improvement of planning and accounting work through the establishment of financial accounting centers, development of internal economic and commercial calculations [1, p. 8].

Today, neither the Ministry of Education and Science of Ukraine, nor the Ministry of Agrarian Policy and Food of Ukraine, nor the heads of agrarian educational institutions can give a clear forecast on how to train and retrain specialists in terms of meeting the needs of innovative agrarian economy. For this reason, the conditions for the development of integration processes are connected with the delegation of authority: the state regulatory bodies of the agrarian sector, realizing that much more reliable and effective way is to offer the choice for the consumers of educational services, and to delegate

certain powers of strategic and tactical management of integration processes to its participants (first of all, to the organizations that have financial opportunities).

In the case of cooperation between science, education and industry, it is reasonable to propose such a legal form as common activity agreement between institutions. This will provide the opportunity to conduct joint research and the developments of urgent theoretical problems, to hold scientific-methodological conferences, to be engaged in personnel exchanges of scientific, educational and industrial institutions, to create the laboratories on the basis of these institutions for a scientific research. Also such cooperation will ensure the qualitative implementation of educational programs. In this way, an exchange of ideas, knowledge and experience will be carried out.

The mechanisms of such cooperation should be proposed at the State level.

We may note that today's system of scientific, educational and industrial institutions is not approved at the legislative level, however, some its elements are performed in the territory of Ukraine, which would have formed an organizational hierarchical structure for the integration of science, education and production. Thus the organizational mechanism should work, we mean the chronology in designing of structures, detailed analysis and the identification of framework, thoughtful allocation of organizational units and their forms of coordination for maintaining some complex (organizational system) [2, p. 93].

At the state level, it is possible to distinguish between three groups of legal rules that address the issues regarding the operationalizing of business, science and education integration .

1. Laws, legislation and regulations governing scientific activities.
2. Laws, legislation and regulations governing educational activities.
3. Laws, legislation and regulations governing innovative processes.

Laws, legislation and regulations governing integration processes of business, science and education.

The rules of fiscal and tax law, which consolidate the foundations of the legal sta-

tus of scientific, educational and business organizations as entities, and regulate lots of common issues related to economic conditions of integration process.

These are also legal acts on intellectual property protection [3, p. 19].

It should also be noted that legal and organizational foundations have been established in Ukraine for maintenance of integration mechanisms of agrarian education, science and industry, but there are some shortcomings that need to be addressed, above all, at the legislative level.

The process of integrated complexes formation should be performed on the basis of well-founded and regulatory enshrined rules. Experts estimate that the ukrainian legislation in this field is in its infancy today: there is no a single legislative act that would have established the legal mechanisms for the integration process of science, education and business, there is no a system of interrelated and harmonized legislation and regulations that governs the relations in this field.

According to "Ukraine's Innovation Development Strategy for 2010–2020 in the context of Globalization Challenges" it was proposed to take action on:

- 1) modernization of higher education, extension autonomy of higher;
- 2) educational establishments in educational, scientific, financial and economic activities;
- 3) optimization of the network of higher educational institutions; the creation of enlarged regional universities, transforming them into powerful educational, research and innovation centers;
- 4) changes in the approaches of State contracts formation for the training of specialists with a higher education, including training of highly qualified personnel in innovation activities (management, marketing, finance, commercialization); the creation of a single scientific, teaching and methodical training mechanism of personnel for innovation field;
- 5) state support for young people, who are trained and undertake internships in leading foreign universities and research centers in the areas of innovation activity;
- 6) the improvement of educational and scientific infrastructure and the sys-

tem of basic and applied scientific research in higher educational establishments, the implementation of scientific findings into educational process;

7) comprehensive support for research, scientific and technical activities on further development of science in the leading higher educational institutions, the improvement of physical facilities, in particular by providing them with a modern expensive equipment, the development of innovative activity structure and technology transfer for the implementation of scientific and technical developments [4].

Economic conditions for science, education and business integration are connected with the pooling of resources to get the national and commercial effects. It is necessary to create a comfortable environment for the development of innovation in various fields of science and education. It is proposed to provide tax and economic benefits for the enterprises engaged in the development of new technology in production, to ensure the creation of special economic zones, etc.

Speaking about the economic conditions of integration, it should be noted that the destabilizing influence have affected and continue to affect the negative economic phenomena on the development of science, education and business associated with the transitional period:

- 1) social and economic instability;
- 2) funding gap;

3) obsolescence and discrepancy of material and technical facilities for the modern needs of scientific and educational activities;

4) a steady decline in the number of young personnel and reducing the number of researchers and teaching staff due to the lack of adequate payment. Such situation is the most typical for the field of agrarian education and science.

At the same time, in recent years, there has been a positive trend in the development of Ukrainian innovation business: increasing in the number of small innovative enterprises, increasing of domestic expenditure for research and development, increasing the proportion of extrabudgetary funds in domestic expenditure for research

and development. Under these conditions, the study of the impact of integrated information technology development on enterprise development of the country is more urgent than ever.

Conclusion. Solving these problems should promote the development of integration processes in the agrarian sector, motivate the partners to integrate. It is assumed that the integration of agrarian education, science and production will lead to an increasing innovative capacity of the agrarian economy. The purpose of the projects and programmes carried out in this area is to improve competitiveness of domestic enterprises by training good labour practices for their staff and nice transfer between agrobusiness and science.

The integration processes must develop in certain organizational forms (technoparks, research universities, scientific production associations, consulting companies, etc.) which are capable of solving research, educational and production tasks, as well as of meeting employers' needs in highly qualified staff.

References:

1. Breslavets T.I. "Integration of education, science and industry as part of modern development". *Visnik DDFA. Ekonomichni nauki*. 2014. № 2. P. 8–16.
2. Voytovych N.V. "The formation of integrating cluster in the agrarian sector". *Zbirnyk naukovih pratz Tavriyskogo derzhavnogo agrotehnologichnogo universitetu (ekonomichni nauki)*. 2013. № 2(6). P. 93–99.
3. Stolyarov V.V The formation of the agrarian sector development strategies in the conditions of Globalization. *Ekonomika AПК*. 2014. № 4. P. 18–23.
4. Ukraine's Innovation Development Strategy for 2010-2020 in the context of Globalization Challenges / contributing authors: G.O. Androschuk, I.B. Zhilyaev, B.G. Chyzhevsky, M.M Shevchenko. K. : parlamentske vyd-vo, 2009. P. 632.
5. Shubravskaya O.V. Integration Perspectives of Ukraine: benefits and risks for the agrarian sector. *Ekonomika Ukrayiny*. 2014. № 1. P. 63–73.

Сичова М. О., Байдак І. І., Плотницька А. І. Сучасні проблеми інтеграції аграрної науки, освіти та бізнесу в Україні

Досліджено переваги, які отримують партнери з інтеграції. Зокрема, інтеграція допомагає освітнім структурам у таких аспектах, як: підвищення якості навчально-виховного процесу, розширення практичної бази, підвищення рівня науково-дослідної роботи тощо; інтеграція сприяє розвитку наукових установ, що входять до складу інтегрованої формації, посилює штатний склад дослідників, підвищує ефективність та якість наукових розробок, покращує патентну та ліцензійну діяльність тощо.

Визначено, що невід'ємною частиною інтеграційного процесу є розширення ринків збуту. Формування нових структур, викликане інтеграційними процесами, супроводжується вдосконаленням планово-бухгалтерської роботи через створення центрів фінансового обліку, розвиток внутрішніх економічних і комерційних розрахунків.

Обґрунтовано, що умови розвитку інтеграційних процесів пов'язані з делегуванням повноважень державними регулюючими органами аграрного сектору; делегуванням певних повноважень стратегічного та тактичного управління.

Досліджено основні групи правових норм, які стосуються питань інтеграції бізнесу, науки та освіти. Зокрема, існують закони, законодавство та положення, що регулюють наукову діяльність; закони, законодавство та положення, що регулюють освітню діяльність; закони, законодавство та положення, що регулюють інноваційні процеси.

Визначено головні негативні економічні аспекти, що пов'язані із сучасним розвитком науки, освіти та бізнесу. Зокрема, існує соціальна та економічна нестабільність; розрив у фінансуванні; застарілість та невідповідність матеріально-технічних засобів сучасним потребам наукової та навчальної діяльності; постійне скорочення чисельності молодих кадрів та зменшення кількості дослідників та викладачів через відсутність належного рівня оплати.

Проаналізовано позитивні тенденції розвитку українського інноваційного бізнесу. Зокрема, відбувається збільшення кількості малих інноваційних підприємств; збільшення внутрішніх витрат на дослідження та розробки; збільшення частки позабюджетних коштів у внутрішніх витратах на наукові дослідження та розробки.

Ключові слова: аграрна наука, бізнес, законодавство, інтеграція, освіта, розвиток.