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REGULATION MECHANISM OF INNOVATIVE DEVELOPMENT OF RESEARCH SECTOR OF THE HIGHER EDUCATION SYSTEM IN UKRAINE

The purpose of this publication is to generalize and deepen the scientific approaches to defining the essence of the state regulation of the innovative development of the research sector of the higher education system (SRID RS HES); to develop the classification of the forms and models of the SRID RS HES; to explore the main areas of the SRID RS HES; to summarize the current national and international experience of using forms of the SRID RS HES to use it in the economy of Ukraine and Lebanon; to analyze and evaluate the features of the SRID RS HES the interregional and regional levels of the national economy; to develop the author's model of rating evaluation of the competitive positions of the universities oriented on the innovative development; to develop the strategic directions of the SRID RS HES in Ukraine; to develop the proposals for improving the organizational and economic bases (mechanism) of the adjustment of the SRID RS HES; to form the financial conditions for the innovative leading of the higher education institutions in terms of the research activity under conditions of the integration processes in HES.

The definition of the category «scientific research sector of the system of higher education institutions» (SRS SHEI) as a set of units of universities of the III-IV levels of the accreditation engaged in scientific, technical and innovative activity, technology transfer within the organization of the activity of the system of the providers of the educational services with the goal of implementing the research component in the process of quality assurance of higher education, is formulated.

The theoretical generalization of the category «the innovative development of the research sector of the system of higher education institutions» (ID RS SHEI) allowed to formulate a definition of the nature of its state regulation as practical organizational, administrative and management influence of the government on the relations, processes and structural elements of national economy, which covers the scientific research activities HES, in order to arrange them, saving and transforming forms, which relies on the powers of the state, creating conditions for lasting and smooth functioning in order to obtain the expected significant social and economic results.

The basis for the SRID SR HES, that only under certain conditions acquires characteristics of the perfect consistency and functions as a multi-level, hierarchical, partly self-regulatory, needing forecasting and management of the long-term economic development set of the interrelated elements, should be based on the

process of the planned development of the RS consisting of the commercial, marketing and investment components of the integrated innovation potential, as well as the set of the methods of solving tasks of the strategy development, mechanisms, tools and forms of the development of the research activity with the possibility of receiving world-class results and their further use in the profile (educational) activities. During the effective regulatory intervention, the possibilities to adjust the direction, speed of the implementation and the nature of target marks of the development of the RS as an object of control are realized, there is their assessment in terms of the compliance to the requirements of the satisfaction of the economic interests of stakeholders.

As the strategic directions of the activity of the public administration bodies (PAB) in the process of implementation of their regulatory functions, including the RS HES we considered: the creation and implementation of the legislative framework and the legal field for the free development of the subjects of the economic process, combined with the control of the compliance with the regulatory acts; creating and ensuring conditions of fair competition by means of price regulation policies; selective stimulation of producers of the strategic goods (services); implementation of the effective social policy by means of the regulations of the level of employment, distribution of resources and income between the individuals; realization of the effective state policy of adaptation of the subjects of activities to changing conjuncture in the markets including creation of the favorable conditions for the activation of industrial activity.

The SRID RS HES is based on the universal methods – means of influence of the PAB on its object: the direct administrative influence in the form of the regulatory instructions with the status of the compulsory execution, which aims the operative obtaining economic result (payments, contributions, purchases); indirect methods to create conditions for the independent choice by objects of management options for action that meet the strategic goal of the economic policy of the state (Fig.).

The main directions of the state regulation of the innovation development of the scientific research sector of the system of higher education institutions that guarantee the realization of their objectives to reform and reorganize management system of the research activities, transformation of the universities into the innovation active competitive institutions which effectively and dynamically linked to the labor market, adapted to the requirements of the world and European educational and scientific space and in perspective fully integrate with them, they are able to achieve this goal: to ensure absolute leadership in science, the implementation of targeted projects, covering all stages of the research and production process; to promote the development of the innovation infrastructure, adapting advances of the global science and technical progress; to ensure the diffusion of the innovation, to create a favorable environment for the innovation rationalization of the structure of the NE in compliance with the post-industrial model of its functioning.

To establish the degree of the effectiveness of the means of the SRID RS HES in the scales of the NE, their impact on the formation of the resulting indexes of functioning of the innovation economy, we proposed to use the method of forming subaccount of the scientific research and development works (R&D), in the structure of

the satellite account of the education of Ukraine. The introduction of the subaccount of the R&D provides the methodological framework and serves as a factual basis for determining the scope and extent of the direct, indirect and induced impact of the innovation active high schools, and in their composition RS HES, on the formation of indicators of the employment and enterprise development in terms of the state regulation of the formation of the post-industrial model of knowledge economy.

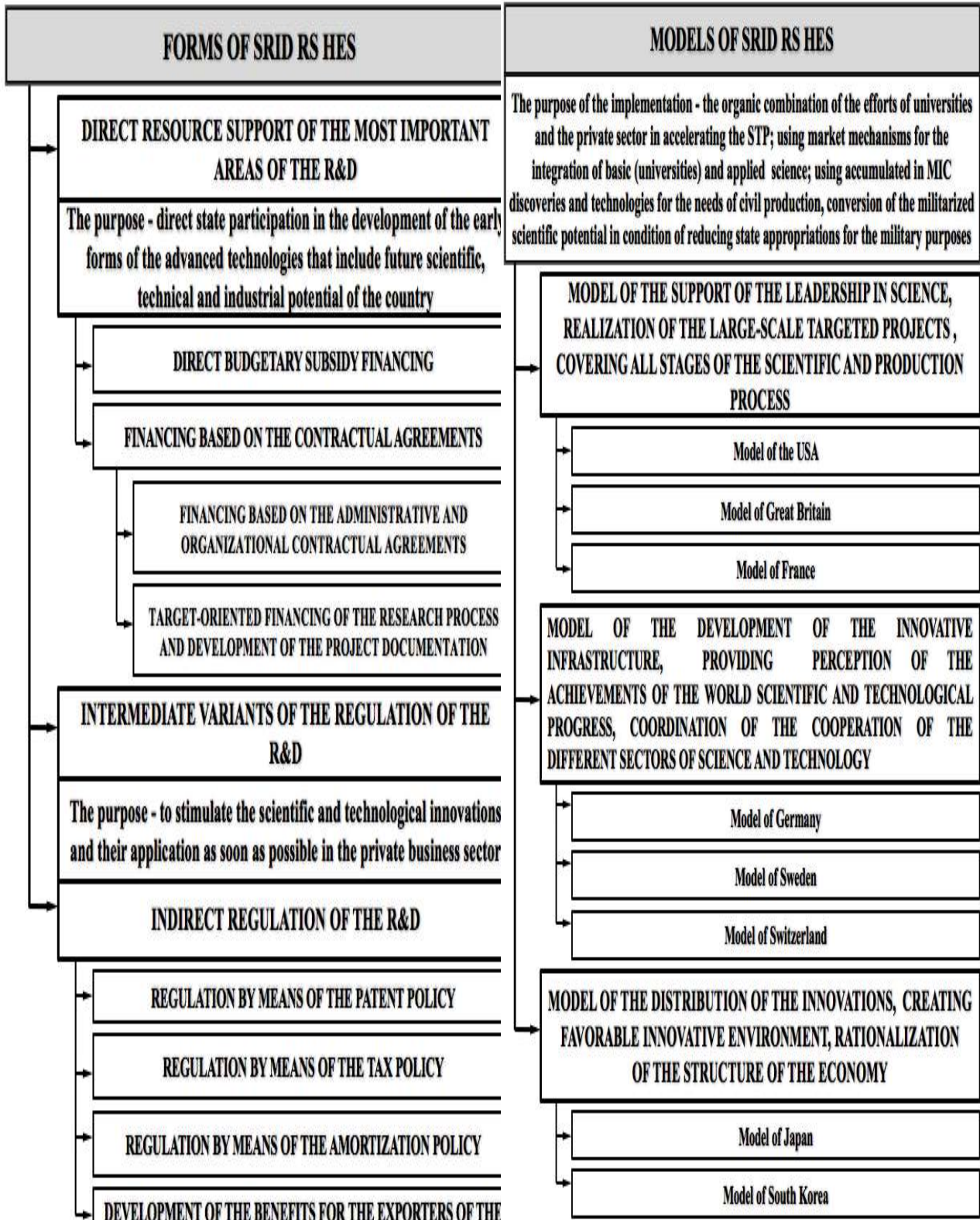


Fig. 1. Forms and models of the SRID RS HES

Source: developed by the author

Besides satisfying the traditional analytic needs of the PAB, monitoring and auditing of the indicators of functioning of the RS HES also acts as an element of the regulation of the university on mesoeconomic level – regional educational systems, public university associations (for example, human, technical) innovation and education clusters (IEC), technology parks, technology platforms etc.

The features of the SRID RS HES for the case of the participation of the university in the activity of the technology platforms (TP) are observed. Focusing the intellectual efforts and funding of the financial agents – budget entities and business groups / private structures – on the priority «focus» technologies developing within the TP, the PAB can indirectly regulate their activities using the financial techniques, leverages, regulatory legal enforcement and information and methodological providing. The main mechanism of the investment attraction of the private sector thus acts the public-private partnership (PPP), which is under the auspices of the public authority bodies capable of applying various forms of tax incentives for the innovative activity partners.

A financial mechanism was proposed for the commercialization of the results of the innovative activity in the case of universities participating in IEC activities both during the implementation of R&D, and at the stage «startup» creating an innovative production company with the differentiation of the sources of attracting and refunding costs. Features of the financial mechanism of the regulation of the universities participating in the operation IEC are defined with the features of the methods of raising funds: government funding for the non-repayable basis; raising funds through banking mechanisms; funding from the commercial sector; investors transfer ownership interest in implementing small enterprises to raise capital. The same variety of the variants options refunds differ – means of the market implementing ideas, «know-how», patents, utility models, software, copyright works; market implementation of the patents on methods and means of their realization; the market realization of the right on the research (signal) samples of products; by the transfer to end users the innovative products at a special price; by the market realization of the right on the industrial product samples and more.

The necessary conditions for the effective management of the process-oriented approach to increase the investment attractiveness of the sector of the SRA HEI that, unlike the current procedure, fully meet the modern realities of the limited funding from the state budget and the need of crowdfunding by private investors determined: usage of the compulsory procedures for evaluating the general efficiency of each individual innovation, developed by universities; commercial effectiveness calculation for the HEI as a whole and its specific programs; identification of the organizational and economic mechanism of introducing innovations (innovative project); installation of the level of the commercial viability of the project for the customer; assessment of the likelihood of the realization of the variants of support of the investment project; writing, by conventional methods, business plan of the implementation of the potentially profitable process of the investment of the commercial innovation. The sequence of calculating the cost and price of the research, providing the effective material incentives of the innovative development of the sector of the SRA of the innovation-active universities is provided.

In the research process it is found that the adequate current state and requirements of the research sector of the higher education system in Ukraine is a set of tools to stimulate the innovative activity, which includes in its list: the organizational mechanisms to attract leading scientists and teachers with experience in scientific, research and institutional collaboration with leading universities in the world; management of the IHE involving stakeholders and based on the collective and manager approaches; providing academic and financial autonomy of the state universities with forming their status as beneficiaries of the budget while preserving all the benefits of the budgetary institutions, but with the gradual transfer of the property order in the property; the regular diagnostics of the labor market in terms of the rational use of the budget funds to finance the university; ensuring the competition in the education market based on the quality evaluation of the educational activities (QEEA) and financial mechanisms of the transformation of budget financing of universities based on the competitive approach and objectify QEEA evaluation system; facilitating the integration of universities and research institutions; increasing of the social status of the educational and scientific researchers engaged in the innovative activities; concentration of the budgetary resources of the state in major university centers combined with funding of the industry leading regional universities; encouraging the private investment in the higher education and research.

In the process of determining the financial conditions for the innovative leading for science and research sector (department) (SRS (D)) of the HEI it is found that it is advisable to put the process of the innovation and technological budgeting of R&D into its basis, considering the specifics of the limited funding from the budget. The creation of the conditions for the leading provides the implementation of the comprehensive assessment of the efficiency levels of the development process and the implementation of the innovative product. The sequence of calculation of costs and prices of the research should provide effective incentives for SRS (D) innovation development.