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Innovative and investment development of agroindustrial production within the framework of food security

Scientific problem. The low activity of innovative business development in modern agriculture linked with imperfect institutional mechanism for economic development of innovations. It promotes the degradation of complex industries, increases the cost and reduces the competitiveness of products, hinders socio-economic development of rural areas, which significantly reduces the quality of life in rural areas and thus directly affect the level of food provision.

The main institutional and economic criteria and factors that are hindered innovation in agricultural production, still remains high cost of innovation, lack of own funds, high economic risk. Stating definite issues is provided through state participation in determining national priorities and active influence of government on the process of innovation development through economic incentives aimed at supporting innovation activity of enterprises in terms of preserving food security requires the state to develop appropriate mechanisms and tools to stimulate innovative development of agricultural production.

In addition, innovative software development crucially determines the level of food security of the population and socio-economic situation in the country.

Analysis of recent researches and publications. Developing the level of knowledge of the problem, note that the relationship between the

degree of state intervention in the economy, choice of forms and methods of regulation are raised and developed by many economists.

The problems of state regulation of agricultural production and state support of agricultural producers in a market economy are devoted in the works of V.Ya. Ambrosov [1], O.M. Borodina [2], O.Ye. Gudz [4], G.G. Karpenko [5], P.T. Sabluk [8], P.A. Stetsyuk [9], etc.

Noteworthy works of such foreign scholars as: M.E. Porter [11], T. Ratering, T. Medonos, M. Hruška [12], William F. Sharpe, Gordon J. Alexander, Jeffery V. Bailey [13], C. Freeman [14], P.F. Drucker [15] and others.

But this problem remains understudied in terms of transitive economy, which leads to the need for continued in-depth research in this area. A characteristic feature of the study is a definite problem and fragmented, resulting in a consideration of one or more regulatory mechanisms, such as planning or budget support to intergovernmental relations. Thus, a single integrated concept of state regulation of the procedures is concerned innovation and investment development of agricultural production, including the most effective approaches to the formation and use of management tools in APC are not still produced.

The aim of the article is to develop institutional criteria and ways of innovation and investment development of agricultural production and development institutions to ensure that corresponding to the present stage of transfor-

mation of the market environment in terms of food security.

The objective of the article is to develop institutional criteria and ways of innovation and investment development of agricultural production, as well as institutions to ensure this development, which correspond to modern stage of the market environment transformation in the conditions of European integration changes.

The current stage of development is characterized by an accelerated technological progress and the growing intellectualization of the basic production factors. Intensive research growth and development on its basis new technologies and products, its output to the world markets and the development of international integration in the field of research and production within global economy in fact have already become a strategic model of economic growth in developed countries. Agricultural production is an integral component of the national economy connected directly or indirectly with the majority of economic sectors. The natural fertility of the land and remoteness from major sale markets (determine the differential rent I and II) also increase its dependence on the transportation system, presence of granaries, vegetable storage facilities and refrigerators. There is also a strong connection with the life-support of people living in rural areas in branches such as housing, electricity and gas supply, education and health. With the development of society, such relations are becoming more popular, diverse and complex.

We agree with the author who claims that Ukraine can not be a prosperous country ignoring agricultural production [7] adding to it an innovative component. Moreover, according to the experience of developed market economies, exceptional conditions for the development and mechanisms to stimulate innovation and investment activity should be created for the development of agricultural production as it is the basis of food security.

Our country possesses all the institutional conditions to transform agricultural production in one of the engine of the national economy and realize these unique opportunities in correlation with the modern high-tech industries, transport, fuel and energy complex. Domestic agriculture can fully provide the population with the basic agricultural commodities and in the future become one of guarantors of global food security [1].

The need to meet consumer demand for new products, improving efficiency of development and implementation of product innovations cause the formation of a continuous process of "formulation - development - implementation". Therefore there is a need to identify institutional criteria and features that can be used to determine the basic innovative enterprise component and identify the factors affecting its formation as well as the interconnection of all enterprise strategies.

The integrity of enterprise innovation strategy depends on interaction between all functional strategies based on strategic goals (Figure 1).

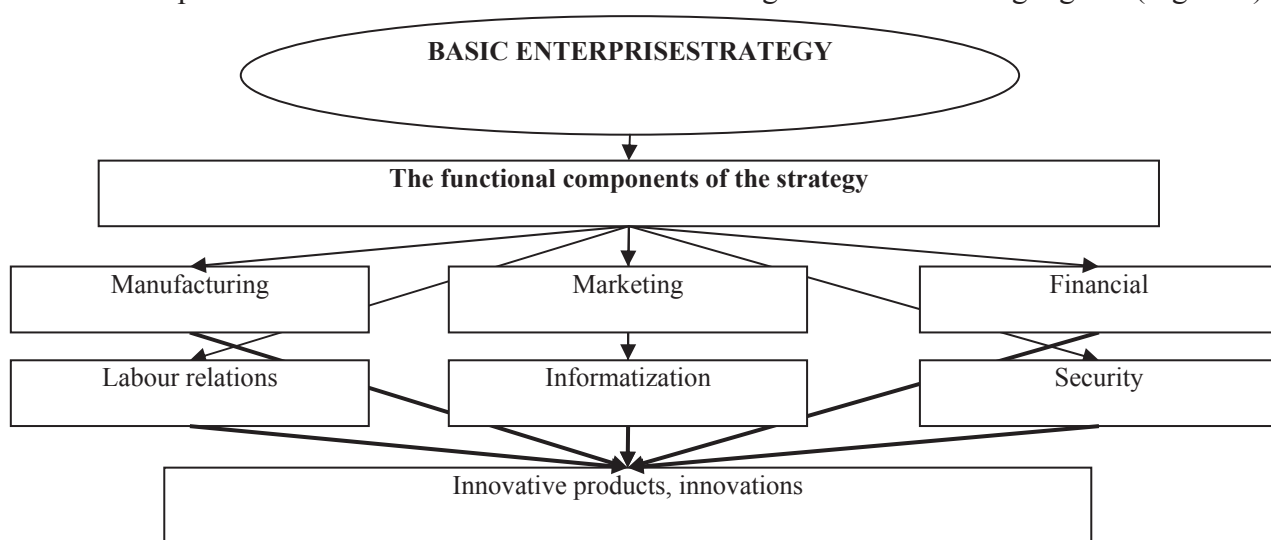


Figure 1. The enterprise innovation strategy towards the creation of innovative products

Source: it is created by author on the basis of studies and generalizations.

A special condition to ensure the enterprise innovation strategy is to develop a system of its institutional criteria and indicators (Figure 2) on the basis of the kinds of innovative products are determined.

As a result, the innovation strategy will have a so-called profile classified in accordance with

the logical, factorial, temporal and evaluative criteria. On the basis of criteria and indicators of innovation the strategy of enterprise innovative activity is determined allowing to establish the factors influencing its formation.

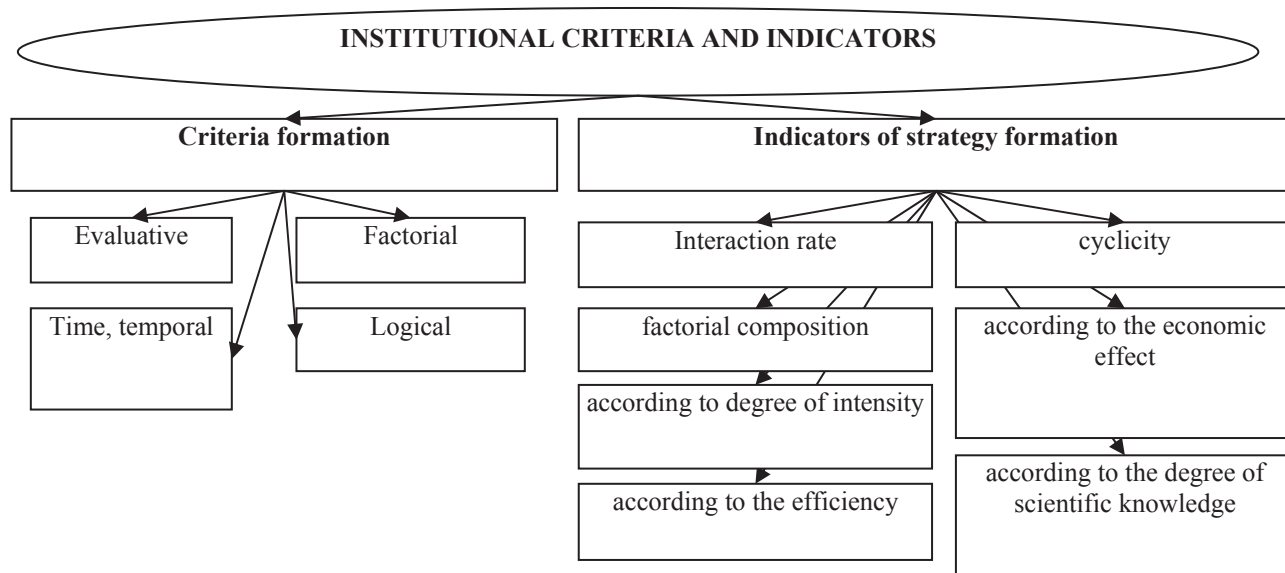


Figure 2. Institutional criteria and indicators influencing the enterprise innovative activity towards the creation of innovative products

Source: it is created by author on the basis of studies and generalizations.

We made the research and determined that , the basis of innovative development of an enterprise is formed by means of internal strategies, presented by innovation cycle and innovation process within the whole innovation system, which includes the following most important components that form a holistic innovative environment institutional and economic mechanism of functioning enterprises: the scientific sphere, development institutions (innovative infrastructure, that is divided into small and large innovation business), system of government involvement in innovation and economic processes and a set of external factors. In conclusion, the innovation system forms such relations that occur within these segments, whose functional linkages are reflected in Figure 3.

A multidimensional mechanism creation with the aim to stimulate innovative activity in agricultural production, characterized by a high degree of uncertainty and risk, will enhance the progress in science and technology from basic research to application of research findings in

production, taking into account the state (public) priorities of the industry of the industry development, and in the future ensure stable development.

Analyzing institutional components of economic mechanism functional linkages (Fig. 3), it can be noted that there are significant deficiencies in the functioning of some of its components, which are expressed in a weak use of specialized venture and investment funds, weak resource base of innovative entrepreneurship and weak integration of the scientific sphere in innovation creation and implementation.

The research concerns the functioning of the innovation and investment environment of agricultural development has shown that the basic mechanisms of further improving of the innovation infrastructure should be the following: combination of free economic zones and industrial parks as a key direction of the innovative development of the industry; creation and development of business and innovation infrastructure to ensure rapid growth in the number of active small and medium-sized enterprises

and their transition to the implementation of innovative projects; providing assistance in finding information on existing innovative projects and their commercialization. All this allows to create the structure of innovation infra-

structure institutions, that provide and have direct impact on innovation business development and the economy in general and the agricultural sector in particular (see. Figure 4).

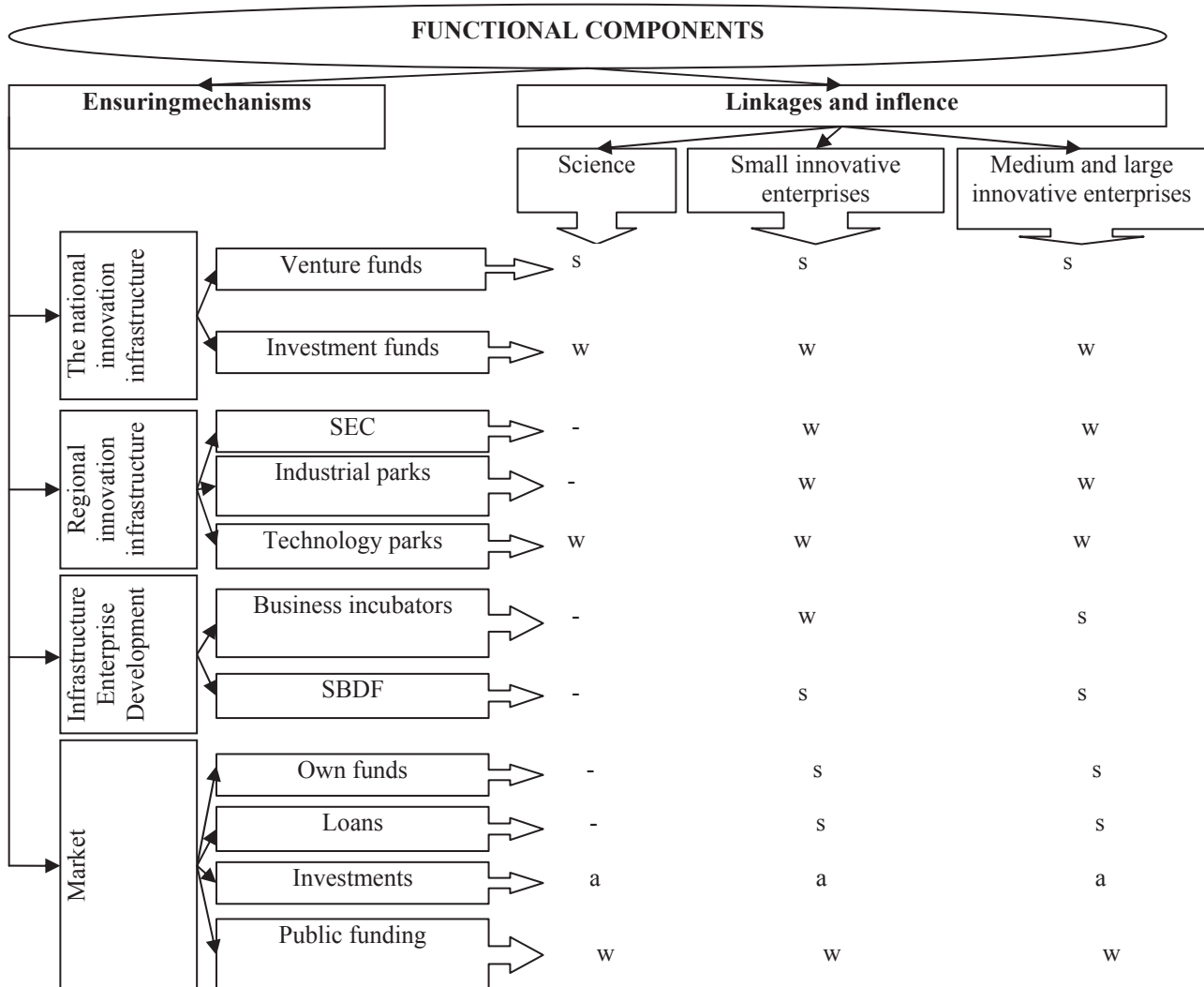


Figure 3. Functional components of institutional and economic mechanism innovation environment and linkages between them

Abbreviations and symbols: SEC - socio-entrepreneurial corporations; SBDF – Small Business Development Fund; сил – strong link, a – average link; w – weak link; n – there is no connection;

Source: it is created by author on the basis of studies and generalizations.

However, modern conditions of European integration transformations force domestic companies and public authorities to reconcile its investment and innovation policy in accordance with the current economy's condition, defining a way of reforming the innovation environment and stimulation of innovation activity, which in the future will ensure a high level of enterprises competitiveness on foreign markets, reduce dependence on raw materials exports and manufactured goods imports and permit to

move to the post-industrial type of economy development.

The state stimulation mechanism of innovative activity in agricultural production is a combination of economic, institutional and political mechanisms of purposeful interaction of market participants (businesses, scientific and technological development entities) and their impact on the activation of their innovation development activity.

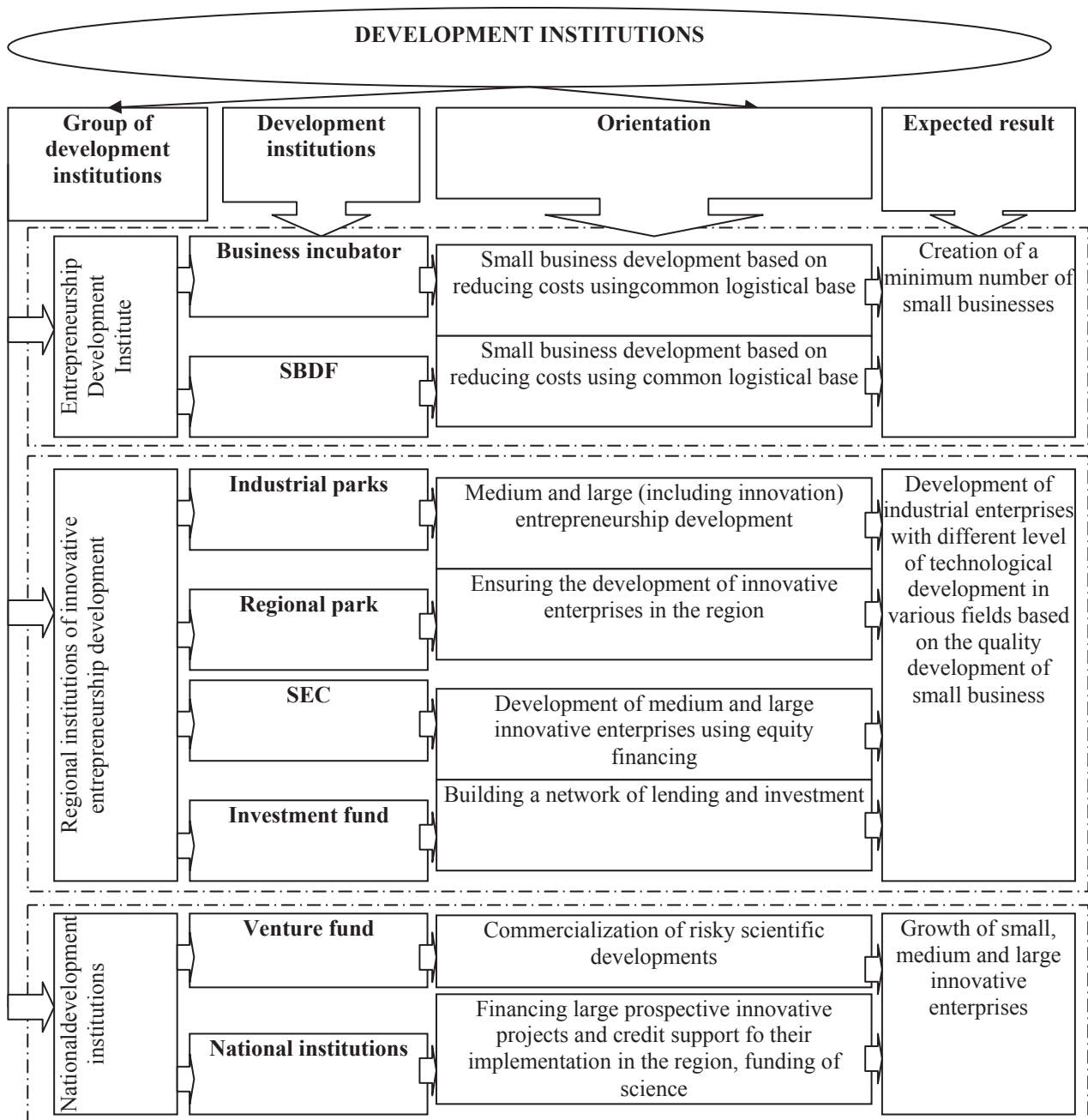


Figure 4. The structure of the development institutions of innovation and investment support in innovation activity

Source: it is created by author on the basis of studies and generalizations.

The need for development of public system of innovation stimulation in agricultural production is due to the fact that currently the adaptation of the agricultural enterprises to novelties and innovations is passive, which implies the implementation of research findings developed outside the agricultural sector.

The main sources of funding for agricultural research should be the state budget and the research scientific organizations' activity for self-financing issues.

The possibility of concluding agreements on scientific researches with organizations and enterprises is limited as the majority of customers (agricultural producers) is unable to pay for it. Therefore, the only effective way to apply innovation in agriculture sector is its transforming into market basis under the condition that it will get significant budgetary support and limited government control in the form of indirect financial incentives.

In general, the mechanism of state stimulation of innovation implementation in agricul-

ture sector should include the following functional elements: stimulating objects; forms and methods of indirect stimulation; instruments of state indirect impact; innovative development conditions' measurement of a specific time period and specific regional conditions; mechanism of the results' evaluation of innovation policy in agriculture, based on government stimulation.

Conclusion. In the current unstable economic environment, where many agricultural enterprises are insolvent a state using its indirect stimulation and support methods should en-

courage the growth of innovation activity, practical implementation of scientific and technological achievements and update material base of industry to increase the efficiency of agricultural production that will increase the competitiveness of domestic food on the world market.

The system of state credit stimulation of innovation activity will help to solve a set of problems in agricultural sector such as: a general increase in the use of innovative developments, providing restructuring of agricultural sector and increase of competitiveness.

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