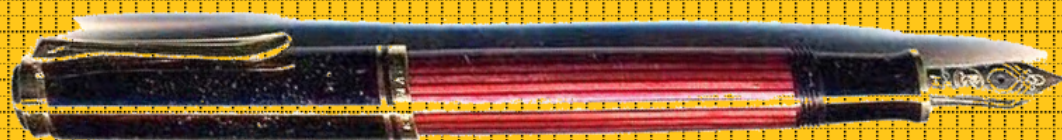




ISSN 2587-313X
E-ISSN 2587-3121

The Scientific Journal

*of Cahul „Bogdan Petriceicu Hasdeu”
State University*



Economic & Engineering Studies

Piața Independenței 1,
Cahul, MD-3909
Republica Moldova

tel: (373 299) 2.24.81
journal.ees@usch.md

semestrial edition

1(1)
2017

ISSN 2587-313X

E-ISSN 2587-3121

<http://www.usch.md/economic-engineering-studies/>

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***ECONOMIC & ENGINEERING
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Tel: 0299 22481; Fax: 0299 2 47 52; E-mail: journal.ees@usch.md

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**CLASSIFICATION OF PROCESSES OF REPRODUCTION OF FIXED CAPITAL
OF THE AGRICULTURAL ORGANIZATIONS**

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Abstract: *It is described that questions of economic growth, the advancing investments, preservations of food security of the country demand from economy of the Russian Federation of an exit to the new level of functioning that is impossible without effective management of process of reproduction of fixed capital in the agricultural organizations.*

Materials and methods. In work the analysis of the treatments of the concepts "reproduction type", "type of reproduction", "reproduction method", "reproduction form" existing in the Russian scientific community was carried out, the conclusion is drawn on considerable confusion in terminology, need of identification of these concepts is noted. Authors analyzed essence of these concepts, author's treatments of the studied definitions are given. It is separately emphasized that from the point of view of authors ascertaining of existence of certain types, forms and types of reproduction can be made only after carrying out the corresponding analysis of real processes.

Results. In the article the problem of a typologization of processes of reproduction of fixed capital on the basis of change of indicators of the general and average power of elements of fixed capital on the basis of these forms 17-APK annual accounting reports of the agrarian and industrial complexes organizations of the Nizhny Novgorod Region for 2010-2013 were solved. On the basis of the cluster analysis of their values the main 9 types of the organizations for these indicators were allocated.

Discussion. On the basis of the analysis of change of types of the organizations 8 types of reproduction of fixed capital on change of indicators of power were allocated, their prevalence is analyzed. It is noted that the agricultural organizations of the Nizhny Novgorod Region generally increase as average, and the specific power of the fixed capital.

Conclusion. In the conclusion authors noted the further perspective areas of work on this subject.

Keywords: *capital, fixed capital, reproduction of fixed capital, reproduction purpose, object of reproduction, subject of reproduction, reproduction source*

JEL Classification: B41, E22, O13

Introduction

Questions of economic growth, the advancing investments, preservations of food security of the country are particularly acute for economy of the Russian Federation more than ever today. Today the need for increase in efficiency including agricultural production that it is impossible without increase in quantity and improvement of quality of the economic resources which are at the disposal of the agrarian and industrial complexes organizations is obvious.

Table 1. Types, forms and methods of reproduction of fixed capital in the Russian literature

REPRODUCTION FORMS	
Author	Reproduction forms
Abakumov R. G. [1, page 2]	Simple, expanded, narrowed, innovative

Trubin A. E. [2, page 16]	Compensation, expansion, modernization, replacement
Hlynin E. V., Vasin L. A. [3, page 1]	Narrowed, simple, expanded (is divided into extensive expanded and intensive expanded)
Buttayeva S. M. [4, page 7]	current, average and capital repairs, modernization, reconstruction, expansion, modernization, new construction, replacement technically worn-out and outdated
Ashmarina T. I. [5, page 7]	Acquisition, technical arms, restoration
Hlynin E. V., Gorodnichev S. V. [6, page 3] Cherepanova M. V. [7, page 9]	Reduced, simple, expanded
Tyupakov K. E., Papakhchyan I. A. [8, page 3]	Restoration by repair (current, capital or repair with modernization), replacement of equipment (acquisition of the supported machines, new analogs, qualitatively new equipment)
Onufriyeva A. S. [9, page 12]	Monetary, productive, commodity
Ableeva A. M. [10, page 4]	Simple, expanded
REPRODUCTION TYPES	
Sazonov S. G. [11, page 12]	Discrete, continuous
Trubin A. E. [2, page 16]	Simple, expanded, innovative
Abakumov R. G. [1, page 2]	Extensive, intensive, mixed
REPRODUCTION METHODS	
Ashmarina T. I. [5, page 7]	Replacement, modernization, repair
Ableeva A. M. [10, page 4]	Accumulation (increase in kind), updating
Abakumov R. G. [1, page 2]	Capital and maintenance, modernization, modernization, reconstruction, creations of the new capital

Questions of use economic resources, their updating, always were the focus of attention of the Russian scientists - however, like the western colleagues, they are more accented on studying of theoretical regularities, investigate these processes at the macro level. Meanwhile researches at the level of directly organizations, classification of processes of reproduction of fixed capital as important economic resource are of a great interest.

Materials and methods. The treatment of reproduction of fixed capital as the process of change of set of the qualitative and quantitative characteristics of fixed capital for the most effective achievement of the objectives put before the organization directed by the management of the organization, proved in other works of authors demands separate consideration of a question of a typologization of processes of reproduction in the agricultural organizations.

The analysis of scientific literature allows to claim that the present remains disputable a question of the content of the concepts "reproduction type", "reproduction form", "type of reproduction", "direction of reproduction", there is no uniform treatment of these definitions.

At the first stage we will carry out the analysis of all terms given above. In the table the types allocated in literature, types, forms and methods of reproduction of fixed capital are described below.

The analysis of the presented treatments allows drawing a conclusion on considerable confusion in terminology. The same terms are selected with one scientist as reproduction methods, others - as forms or types of reproduction; besides, according to authors, the given classifications are not able to capture all variety of the existing processes.

It is necessary to decide, first of all, on treatment of concepts of type, types, forms and a method of reproduction that will form the basis for creation of system of classification of these processes.

The following definition is standard: the type is unit of a partition of the studied reality, ideal model of historically developing cultural objects. On other treatment, the type defines the general

signs of a number of objects, the phenomena or actions on the basis of their similarity and similarity. Proceeding from the aforesaid, we define the concept "reproduction type in the agricultural organization" as the certain ideal model of reproduction possessing some distinctive features characteristic of reproduction processes in a certain part of the agricultural organizations.

The concept "look" is other than concept of type. In taxonomy (science about classification) the look is understood as the minimum taxon, i.e., the group consisting of discrete processes, objects united on the basis of the general properties and signs.

The concept of a look is broader concept of type. Respectively, the allocated type of reproduction can include several its types. We consider as the poet that the types of reproduction given above cannot be recognized as those and need revision which is possible only after the analysis of practice of reproduction process.

One more important category is the concept of "a reproduction form". In explanatory dictionaries, as a rule, the form is understood as the internal organization of contents which represents set of parts of a subject and their interaction among themselves.

Therefore, the form of reproduction of fixed capital can be defined as a certain way of interaction of elements of reproduction process. In our opinion, as forms of reproduction it is impossible to allocate the simple and expanded form and other forms describing result of process of reproduction - it can be accepted as type, but not a form of reproduction.

We consider that it is possible to understand external result of process of reproduction as this term - namely quantity of the elements of fixed capital which were carrying out some volume of technological functions before and after the act of reproduction. Proceeding from this treatment, it is possible to allocate 4 forms of reproduction - single, extending, compact and combined. The single form of reproduction is characterized by the existence of the only object of fixed capital before and after the act of reproduction extending reproduction is called if emergence of group of the elements of fixed capital intended for execution of similar functions instead of one element of fixed capital became a result of the act of reproduction. The compact form of reproduction is opposite extending, combined means existence both to, and after the act of reproduction of a certain group of the elements of fixed capital which are carrying out similar functions.

Also in literature the concept of a method of reproduction often meets. A method is the systematized sequence of actions which are aimed at achievement of a definite purpose.

Defining a method of reproduction of fixed capital as a certain sequence of actions for reproduction of fixed capital, we agree with opinion of Abakumov R. G. who allocates capital and maintenance, modernization, modernization, reconstruction, creation of the new capital as methods of reproduction of fixed capital. Content of these concepts is disclosed in Art. 1 of the Town-planning code of the Russian Federation:

- construction - creation of buildings, structures, constructions (including on the place of the taken-down capital construction projects);
- reconstruction of capital construction projects (except for linear objects) - change of parameters of a capital construction project, its parts (height, the number of floors, the area, volume), including a superstructure, reorganization, expansion of a capital construction project, and also replacement and (or) restoration of the bearing building constructions of a capital construction project, except for replacement of separate elements of such designs by the similar or other improving indicators of such designs elements and (or) restoration of the specified elements;
- reconstruction of linear objects - change of parameters of linear objects or their sites (parts) which involves change of a class, category and (or) originally established indicators of functioning of such objects (power, loading capacity and others) or at which change of borders of strips of branch and (or) security zones of such objects is required;
- capital repairs of capital construction projects (except for linear objects) - replacement and (or) restoration of building constructions of capital construction projects or elements of such designs, except for the bearing building constructions, replacement and (or) restoration of systems of technical providing and networks of technical

providing capital construction projects or their elements, and also replacement of separate elements of the bearing building constructions by the similar or other improving indicators of such designs elements and (or) restoration of the specified elements;

- capital repairs of linear objects - change of parameters of linear objects or their sites (parts) which does not involve change of a class, category and (or) originally established indicators of functioning of such objects and at which change of borders of strips of branch and (or) security zones of such objects is not required. [12, Art. 1]

Thus, we consider that types, forms and types of reproduction can be identified only after carrying out the corresponding analysis of real processes.

Results. Within this research the problem of a typologization of processes of reproduction of fixed capital on the basis of change of cumulative average power of elements of fixed capital on the basis of these forms 17-APK annual accounting reports of the agrarian and industrial complexes organizations of the Nizhny Novgorod Region for 2010-2013 was solved. The indicator of power of one OK element is offered to be counted as the relation actually of power OK to work of quantity of elements of the OK different groups. Using designated above a quality and quantitative index, on the basis of the cluster multidimensional analysis of their values the main 9 types of the organizations were allocated. Graphic display of their average values is given in drawing below.

The analysis of the allocated 9 types of the organizations allowed characterizing them as follows:

- the organizations of types No. 9, 1, 6 are characterized by low value of average power of elements of fixed capital and differ from each other in the general power OK (as a rule, these organizations are characterized by a large number of the OK elements and a big structural share of not power elements of fixed capital);

- the organizations of types No. 9, 5, 7 are characterized by low value of the general power of the OK elements at different values of average power OK - at the same time the organizations of type 7, as a rule, has small quantity of the OK elements

- the organizations of types No. 4, 2, 3, 8 are characterized by different quantity of elements of fixed capital at their invariable structure on power, at the same time the organizations 8 of type are characterized by the biggest general and specific power OK.

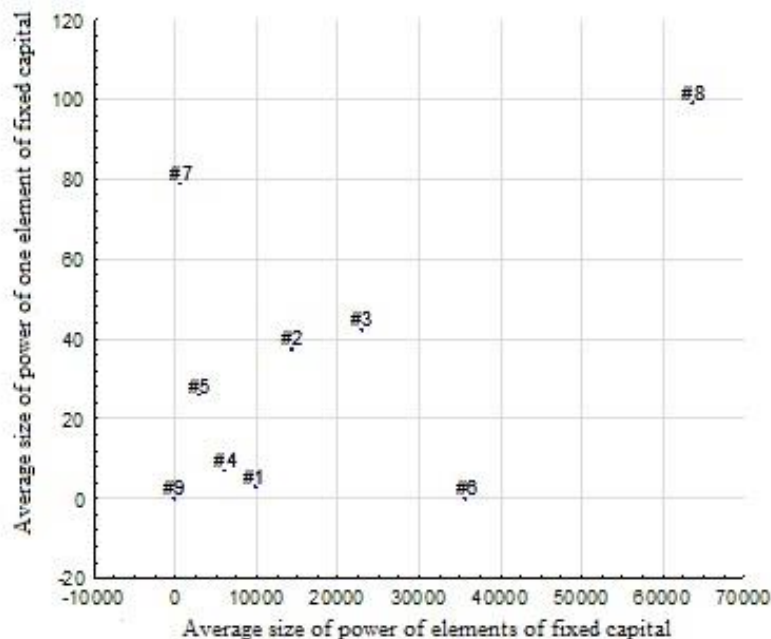


Figure 1. Average values of the allocated 9 types of the agrarian and industrial complexes organizations

Numerical values of average different types of the organizations and dynamics of their distribution are given in the table below.

The analysis of the submitted data allows to state the greatest prevalence of the organizations of types No. 5,7,4 that allows to state an unfavorable tendency of a prevalence of the organizations with the low size of the general power of the OK elements. At the same time It should be noted that in 2013 the structure of the organizations for types of fixed capital towards uniformity of distribution sharply changed - the number of the organizations of types No. 2,3 sharply increased, the number of the organizations of types 5,7 was reduced.

Table 1. Numerical values of average sizes of indicators of power for the allocated types of the organizations and the loudspeaker of prevalence of types in the agrarian and industrial complexes organizations of the Nizhny Novgorod Region for 2010-2013.

cluster No.	The average size of power of elements of fixed capital in a cluster	The average size of power of one element of fixed capital in a cluster	2010	2011	2012	2013
1	9836,79	2,51	48	48	47	55
2	14406,07	37,35	19	20	19	63
3	23061,98	42,04	10	6	5	40
4	6275,43	6,52	79	81	80	87
5	3095,00	25,46	164	147	128	96
6	35987,65	0,01	6	3	0	11
7	831,45	78,76	187	176	178	95
8	63925,78	98,69	3	3	2	1
9	0,00	0,00	36	45	48	59

Further we will address the analysis of processes of reproduction, i.e. processes of change of the general and specific power of fixed capital through change of belonging of the organizations to this or that type (see the table below).

Table 2. Balance of transition of the organizations from one allocated type to another for 2010-2013.

		Type of the organization in 2013								
		1	2	3	4	5	6	7	8	9
Type of the organization in 2010	1	3	13	25	0	1	1	0	0	2
	2	0	1	10	0	0	4	0	0	1
	3	0	1	0	0	0	6	0	0	0
	4	26	34	0	3	0	0	0	0	4
	5	22	7	0	72	22	0	7	0	3
	6	0	0	0	0	0	0	0	0	1
	7	1	1	1	6	59	0	60	0	19
	8	0	0	0	0	1	0	0	1	0
	9	0	0	0	1	3	0	7	0	14

The analysis of data of table 2 allows noting that for the analyzed period were the most widespread:

- transition of the organization from type No. 5 to type No. 4 (72 organizations) that means considerable decrease in specific power of elements of fixed capital at

increase of the general power that is a consequence of acquisition of a significant amount of elements of fixed capital of not power appointment;

- transition of the organization from type No. 7 to type No. 5 (59 organizations);
- transition of the organization from type No. 4 to type No. 2 (34 organizations), confirming growth and the general, specific power of elements of fixed capital.

Discussion.

On the basis of the analysis of change of types of the organizations the following types of reproduction of fixed capital were allocated (It should be noted that the type of the organization for the power of fixed capital is the static characteristic of the organization on a separate time point, and type of reproduction of fixed capital on change of indicators of power - a dynamic characteristics) on change of indicators of power:

- stable (the type of structure did not change) - 24%;
- averativno-deklivny (decrease in average power OK at stability of the general power) - 18%;
- averativno-reyzyngovy (increase in average power OK at stability of the general power) - 4%;
- modular askensivny (increase in the general power OK at an invariance specific) - 1%;
- modular and reductive (decrease in the general power OK at an invariance specific) - 1%;
- lifting (increase and the general, and specific power) - 21%;
- decreasing (reduction and the general, and specific power) - 1%;
- mixed - 30%.

In general, it is possible to note that the agricultural organizations of the Nizhny Novgorod Region generally increase as average, and the specific power of the fixed capital.

Conclusion. Questions of a typologization and classification of real economic processes of reproduction are an indispensable condition of the correct and effective public administration by all complexes of agrarian and industrial complex today. Further researches in this direction can be conducted:

- regarding development of a technique of the analysis of prevalence of the reproduction methods applied by the agrarian and industrial complexes organizations;
- regarding identification of forms of reproduction of different economic resources;
- regarding creation of uniform classification of types and types of reproduction of economic resources of the organization;
- regarding development of a technique of the analysis of efficiency and other parameters of state regulation of processes of reproduction.

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Received: 23.05.2017

Reviewed: 07.06.2017

Accepted to publishing: 23.06.2017

**WORLD EXPERIENCE OF AGRICULTURAL START-UP
DEVELOPMENT: LESSONS FOR UKRAINE**

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Abstract. *The article defines the specifics and principles of creating startups which are based on an innovative idea, and highlights the world experience of innovative agrarian start-ups functioning. The first agrarian start-ups were created in Israel almost 30 years ago, where the start-up industry is successfully developing now, examples of the most successful of them are given in the article. Sources of financing of agricultural start-ups in foreign countries are identified, the main of which are venture funds, business angels, etc. The experience of innovative agrarian start-ups functioning in Ukraine is highlighted.*

Keywords: *Agrarian sector of economy, Innovative agrarian start-up, Venture funds, Business angels, All-Ukrainian Agrarian Innovations Hackathon.*

JEL Classification: O10, O13, O30

The agrarian sector is a strategically important branch of the economy on which food security and the independence of our state are based. The agricultural sector provides jobs to the overwhelming majority of the rural population of Ukraine, as resources are reduced and the population of the planet grows, the development of new solutions for agriculture becomes especially urgent.

Competitive functioning of agricultural enterprises is impossible without the implementation of innovations. It becomes the most effective when orienting mainly on regional needs for innovations, which are defined by taking into account the natural and climatic conditions, the production structure and the state policy on innovations.

Nowadays it is an urgent need to form a system for communicating information about innovations to improve economic development and environmental safety of agriculture by developing information systems to provide management and improve the efficiency of existing production systems, to potentially affordable enterprises.

The development of an innovative economy involves cooperation between entities having innovative products and those who want to implement them. At the same time, the formation and development of start-ups is one of the promising forms of such cooperation. The startup is seen as entering the market with an innovative project of a new company in a short time and with minimum investment. In other words, start-ups are innovative, limited by initial investment, rapid in development (they are created on average for 3-4 months), not always having high chances for success. A peculiarity of start-ups is that they are created for the production of goods or services in a highly uncertain environment in order to profit in the future. Start-up should be based on a certain innovative idea of something that either does not exist at all or is in limited quantities.

For a start-up to function successfully it is necessary to assess the prospects for the development of the market where the product is to be sold, the customers, competitors, strategy and tactics and finance of the company. The basic principles when creating startups are: the product must be produced quickly, efficiently and with the minimum cost. Financing the start-ups at the initial stage is done by its founders. These funds are allocated to cover the first costs - the development of a business plan, a prototype of the future product, etc. Further investment is made by the investors interested in the development of start-ups.

Startups are quite widely created and successfully developed in foreign countries. A large start-up industry is being developed successfully in Israel now, where the first start-ups were created almost 30 years ago. Today, Israel is confidently leading the world by the number of start-ups per capita, the country has even established the "Startup Nation" brand. The Israeli start-up industry is being developed rapidly - according to Startup Genome research, Tel Aviv ranks the second in the

world after the Silicon Valley and in the rating of the most innovative countries from Bloomberg, Israel entered the top five, even ahead of the USA and the UK.

A significant number of Israeli start-ups emerged due to the lack of resources. In this country hundreds of venture funds and business angels (people who invest money from selling their business into start-ups) are now looking for attractive innovative projects to finance them. In Israel 5000 start-ups account for 250 venture funds (about 70 of them are local), over 1000 business angels and an impressive number of incubators (a separate type of investor, an organization that supports, promotes and finances innovative projects), accelerators (organisation which helps other companies), state and interstate programmes to support start-up companies.

Venture fund is an investment company, working exclusively with innovative enterprises and projects (start-ups). Venture funds invest in enterprises with high or relatively high risk in anticipation of extremely high profits (usually such investments are made in the sphere of the latest scientific developments, high technologies).

The country has also a "Technological Greenhouse" national programme - a network of incubators where start-up entrepreneurs with innovative technology projects receive the necessary financing, as well as all necessary infrastructure and administrative assistance. Two years later successful projects leave the incubator already being a commercial enterprise and having private investments [2].

However, it is a start-up who chooses an investor in this country but not vice versa. In Israel, for a number of years there has also been a system of government grants and subsidies for innovative start-ups. In addition, aiming to stimulate the development of the start-up industry, it is planned to create an Innovation Department under the Ministry of Economy [1].

Agrarian start-ups in Israel are aimed at creating favorable conditions for agricultural crops growing in the desert and include drip irrigation, fertilization using computer technology, etc. Since 1950 Israelis have discovered innovative ways of growing food crops in the desert. For example, in the southern lands 500 families have 10 acres of saline soil, from which each family exports vegetables to Europe for \$ 0,5 million USD every year [3]. The organisers of the Vayyar startup announced the invention of a special chip which helps to observe the quality of the land irrigation [4].

Tal-Ya specialists have developed a technology that helps to get a bigger harvest with less water. Among the developments of the startup are: reusable trays for generating water from the air which reduce the need for water for growing crops by 50% and a square tray of recycled plastic. The innovative tray "surrounds" each plant and collects dew, which appears due to temperature differences during day and night. In addition, the tray (which can function up to 10 years) blocks the growth of weeds on the plantation. The products of the Israeli company are used by farmers in Israel, USA, China, Chile, Georgia, Sri Lanka and Australia. The NRGene start-up specialists are involved into the development of more resistant wheat varieties that can provide a higher yield [5] Thanks to the development of innovative technologies, one Israeli farmer can feed a hundred people.

At the end of 2016 Israel introduced the AgriTask platform for precision farming which will allow farmers around the world to benefit from the introduction of precision farming techniques and advanced agricultural technologies having no problems managing multiple technology systems. AgriTask can optimize the crops growing processes, meets the agronomic and management needs of various sectors of agriculture. AgriTask enables manufacturers to start using precision farming methods not changing the current work processes, for which ScanTask even created a special language for Android. The AgriTask platform helps users to prevent crop threats, protect crops, increase productivity and work efficiency, and save direct material costs from 18% to 40% [6]. This startup is used by 1000 farmers in Israel, Brazil, Peru, Colombia, Mexico, Kenya and Thailand.

In Israel, all conditions have been created for the effective development of the start-up industry: a quality education system, transparent tax policy, sound investment legislation, sustainable macroeconomic indicators and the highest level of confidence in the industry.

In Paris in the first half of 2016, the development of start-ups attracted more than one billion euros of start-up capital. This year they plan to establish the world's largest city of startups Station F., where 34 thousand square meters can accommodate up to a thousand start-ups (it must become the largest incubator in the world). One of the thousands of startups – Agricool is being developed

successfully in France. It aims to grow fruit and vegetables in containers in the middle of cities. For this, ideal conditions have been created: correctly selected lighting, temperature and humidity. As the products reach consumers very quickly, this method of cultivation requires seven times less resources than traditional agriculture (Agricoool uses electricity only from renewable sources). The founders have already attracted four million euros from private investors to develop the start-up [7].

In Holland (Rotterdam) farmers organised a start-up Floating Farm, aiming to create the world's first floating dairy farm with a closed production cycle (total pontoon area – 1200 m²). The farm will operate almost in an autonomous mode (it will be serviced by 2 employees). It is designed for 60 cows which will live on the top floor with a glass roof. The farm will have a floor made of artificial turf, real trees and grass for cows will grow on the ground floor. Wastes from intestinal fermentation will be collected by robots and used as a biogas plant fuel, which (together with solar panels on the roof) will generate electricity for lighting, machine operation and farm heating. It is planned to get about 1500 kg of milk per day. Private investors are ready to invest (2 million euros) in the development of this start-up as the profit is foreseen in the near future [8].

In Austria, the SmaXtec startup implants to a cow a device that monitors the body temperature, activity and acid-base balance every minute. This helps to diagnose animal diseases at the early stages. The device with built-in hot dog size sensors is implanted to the animal in the first of four stomachs, the battery charge is usually enough for four years of use. SmaXtec invention connects to Wi-Fi and can text the farmers information about the state of the animal. SmaXtec cooperates with 350 farmers in more than 20 countries. Only in the UK there are about 15000 such devices, each costing from \$ 75 to \$ 400 USD [9].

A self-managed John Deere tractor that sprays fertilizer works on the farm fields near Hertfordshire (England). The machine is guided by satellite images and the history of harvesting of each site, it is equipped with a large number of displays. The tractor sends important data to the computer system of the farmer. Due to the fact that different programmes allow you to obtain information about weather, pesticide use and soil analysis and also to test plant tissue, a farmer can monitor in real time all that is happening on his farm without leaving the office [10].

In San Francisco, a start-up was established to grow agricultural products in an upright position. Vertical Plenty farms are rows of pallets with plants that extend to a height of 6 m. The startup grows rare varieties of basil, chives, mizun, lettuce, sorrel and other types of leafy vegetables. Plenty farms grow 350 times more than in fields or in greenhouses, using only 1% of water. Such indicators were achieved due to lower equipment and operation costs. Thanks to the development of machine learning, the Internet of things and digital systems for calculating utilities, it became even easier to organise work. Plenty also expects that over time, solar energy will supply the work of the farm.

Due to the isolation of farms, plants are minimally susceptible to parasites, so pesticides are not used to fight pests - it is enough to "hire" ladybirds. The development of the startup attracted \$ 26 million investment from large funds. Startup plans to grow more tasty and diverse greens with greater efficiency but less cost [11].

For reference, in Shanghai a complex of vertical farms with an area of 100 hectares is going to be built; in the American New Jersey, the Aerofarms farm was opened with an area of 14,2 thousand m², which produces more than 900 tons of leaf plants per year (this productivity is comparable to 139,9 thousand m² of farming).

In India, Nubesol Technologies start-up has developed a WhatsApp type application for farmers, where they can communicate with eminent scientists in the field of agriculture and receive their recommendations, discuss factors of influence on the crop. In the Android version of the program there is also a function (RST), which helps to analyse the soil to increase the yield (for this you need to highlight the corresponding area on the Google map). In addition, the application helps to assess the condition of crops. The RST function is paid (it costs about \$ 4 per year). The application is already used by 5000 farmers and about 100 requests are sent by it daily [12].

In addition to venture funds and business angels that invest in the development of start-ups abroad, innovative funds which were created on the basis of educational institutions play an important role. For example, in the United States universities operate large national centers specialising in

various scientific fields. Innovative activities are priority areas for research and development. An Association of University Technology Managers which collects and processes information, publishes a report on the activities of innovation funds in universities also functions in the United States. That means that innovative ideas developed and prepared by students are submitted to the center and can be implemented with the financial support of the innovation fund.

One of the alternative systems for attracting investment is crowd funding - a mechanism for attracting funding from the public with a view to realizing the idea or supporting the development of an already existing business, operates on a "every little bit helps" principle when those who wish can give some money for the project implementation. Crowdfunding is one of directions of crowdfunding, where financial investments are given in exchange for a share in business [13].

Incubators and accelerators do not help gratuitously – these companies either take a fixed entry fee or they could ask for a stake in the company which they will help to develop (from 5 to 20%).

Ukraine also develops and successfully introduces innovative solutions for agriculture, which are competitive in the world market. New technologies are actively used in both plant growing and animal husbandry. In the first instance these are: a system of farm-management, drones and robotics, innovative irrigation and irrigation systems, e-commerce in the sale of agricultural products. A significant number of agro-start-ups are aimed at researching and assessing the state of soils, which is new information which hasn't been always taken into account by agricultural producers until recently. In animal husbandry touch technology, security systems and animal control are used. The part of high technologies usage in the Ukrainian agrarian sector is about 10-12%, which indicates a low level compared to world leaders, where IT solutions in agriculture are used widely enough.

UA Berry start-up is one of successful Ukrainian innovative projects – aimed at growing strawberries all year round on mini-farms on an industrial scale, which has no analogues in the world at all. It is based on a programme that manages the cultivation process and analyses it. According to the strawberries growing technology, the climate control system in the greenhouse and the irrigation system (the node of the Fertigation) are fully automatic. The latest technologies are used for the climate control system – sensors operate over a radio channel and the system could be controlled remotely via the Internet. At the same time, the accuracy of supply of mineral fertilizers is 98,9% – there are no analogues of such a system even abroad. This startup is designed for small commodity producers, as it does not require significant financial investments and large land plots. (Reference: the area where you can plant 132 bushes of strawberry and get an average of 50 kg of harvest, takes 6 m²) [14].

In early 2016, the Ukrainian Ecorobotix start-up introduced a robot that struggles with weeds in the fields. The robot is equipped with cameras, which distinguish weeds from other plants, directs them to a mobile sprayer and produces a small dose of herbicides (it reduces its use in 2-3 times). The robot can orient in space through a GPS tracker and sensors, solar panels are located on the top of the device, it allows 12 hours of work without recharging [15].

It is noteworthy that examples of the successful functioning of projects aimed at establishing interaction between the agronomy developers and potential investors already exist in Ukraine. Thus, AGRO Startup Crash Test (AGRO SCT) project is focused on support of the development of start-ups in Ukraine. AGRO SCT is a set of regular informal events for entrepreneurs and representatives of agribusinesses, aimed at the development and support of innovations in the agricultural sector.

In the summer 2016 the AgroChallenge platform was established, aimed at investing in innovative projects in the agricultural sector. AgroChallenge provides for the creation of a business accelerator for investment and innovation projects, a grant fund for supporting innovative projects in the agricultural sector, the Agrarian Investment Fund and the Agro2027 Investor Club, an investment platform and a regular all-Ukrainian project competition in the agrarian sector [16]. The grant fund allocates money for the start-up development, which received a positive decision from the grant committee. Funds are allocated for projects, which are based on innovative, technological and business components.

In the near future, AgroChallenge will create a network of information and service centers for agricultural regions of Ukraine in close cooperation with farmers' communities. The centers will provide a full range of services in accordance with the needs of farmers in the field, deal with demand and farm

problems, perform educational and training work to improve the quality of projects for the business accelerator. It is expected that the centers will work according to the self-repayment model [16].

In Ukraine, a new investment fund for start-ups and IT projects has been created. It was founded by Concorde Capital - an investment company with a capital of \$ 10 million USD. The capital was formed by both the company's own funds and external contributions and aimed at financing Ukrainian projects (the average investment size is \$ 2 million USD) [17].

According to the Invest Europe Association, EU entrepreneurs invested about € 750,000 in Ukrainian start-ups in 2015, € 40,000 of it was invested in agriculture. According to the last year estimates, the foreign capital receipts in the agro-industrial complex 1,5 times increased [18].

The AgTech Ukraine association provides assistance to enterprising people in the creation of start-ups in agriculture. Within the framework of AgTech Ukraine targeted events are held; sites created where social networking sites, a website, electronic newsletters and announcements with demostands are displayed. Formation and promotion of content for AgTech Ukraine start-ups is free of charge. The AgTech Ukraine Association handles the situation on the market, it helps beginners to get on it and advises to investors. For agricultural enterprises, the entry into AgTech Ukraine is interesting from the point of view of searching for new ideas [19]. This association has all chances to become the main platform for the development of agtech market in Ukraine.

Incubators and accelerators are the instruments for finding investments including foreign ones, networking at conferences and thematic events. Despite all modern technologies, personal contacts are still one of the main ways for start-ups to get acquainted with investors [20]. The All-Ukrainian Agrarian Innovations Hackathon has been held in Ukraine for several years - it is a platform for innovative ideas at the intersection of agribusiness and IT-sphere, it helps to promote young start-ups and their ideas for agribusiness. During the meeting, developers present agrarian start-ups and debate with farmers, young enthusiasts, experienced businessmen, programmers, designers, marketers, engineers and other agrarian innovators. Experienced mentors help, criticise, prompt, share experience and answer questions from participants so that the latter can present their projects better not only in Ukraine but also abroad. The winners of the event receive monetary rewards, prizes from partners and marketing and consulting support from AgTech Ukraine. The Hackathon participants receive a significant push into the world of business and high technologies, as well as the opportunity to participate in a wide variety of conferences, exhibitions and other public events, presenting their own innovative developments.

In the summer of 2016 Svarog West Group and "KPI" University announced the beginning of a long-term cooperation in the development of innovative high-tech products for the agricultural sector with the involvement of faculty staff, researchers and technology park specialists [21].

At the end of 2016 AgroTalks agribusiness development platform introduced a specialized crowdfunding platform for investment in agrarian projects – Donate Agro and Kraudinventing platform – Invest Agro [22], which will attract financial resources (including credit) for the development of small and medium-sized business, young start-ups.

At the beginning of 2017 representatives of the agro-food sector, IT, retail, HoReCa, business education initiated the creation of the Ukrainian Food Valley aiming at uniting managers related to Agri & Food who are ready and able to move to a new way of thinking and acting from Frontal competition to cooperation. The mission of the Ukrainian Food Valley initiative is to create innovative food products and healthy food through the interaction of various players, to jointly promote Ukraine in the world and make it a global food leader thanks to the new generation strategies [23].

Organic farms – the agrarian start-up movement which is quite popular in Europe, is becoming widespread in Ukraine. Ecological farms open their shops and compete with large shopping centers. Products from the eco-farm are sold at not very affordable price but environmentally friendly products are in demand among consumers. One of the successful examples is the FishBuoy start-up for creating an intelligent buoy for fish farms, ponds and other water bodies. A fish buoy can provide the aquafarmer with information about the temperature of the water and its chemical parameters for determining the optimum time for feeding the fish and preventing contamination of the reservoirs, which leads to a saving of food and prevention of fish death [21].

Organic farms are developing throughout Ukraine, but the largest number is observed in its western regions. For example, in the Ivano-Frankivsk region. Owners of eco-farms while growing crops, take care of soil saturation with nutrients - by introducing compost from food and garden waste they create habitat for a huge ecosystem of bacteria, fungi and small organisms, helping to absorb carbon from the environment and keep it in the soil. Scientists and specialists in organic farming are confident that the small farms are the future of farming, as it is engaged in the cultivation of ecological products, restore soil and biodiversity, meet the growing demand of organic products consumers, etc.

Summarizing the above, it should be noted that the main resource for creating a startup is a successful innovative idea. Agrarian start-ups are rather widely created and successfully developed in foreign countries. Taking into account the above-mentioned experience of developed countries in stimulating the development of start-ups, it is necessary to introduce appropriate training in Ukraine for students who show initiative, desire and have innovative ideas for creating start-ups in the near future. It is suggested to introduce trainings for teachers of Ukrainian universities with the participation of lecturers from leading universities of the United States, Israel, the Netherlands, etc., where students' innovative ideas are successfully implemented. Agrarian start-ups in Ukraine need to be stimulated and developed in the future, as they have significant potential.

In order to disseminate information about agrarian start-ups in Ukraine it is necessary to:

- increase the number of All-Ukrainian agrarian innovations Hackathon, which will give greater freedom to introducing promising innovative ideas and will speed up the search for real investors;
- expand opportunities for providing information from start-ups at international exhibitions, conferences, competitions and thematic events;
- distribute information in the electronic resources catalogs, covering the experience of successful development of agrarian start-ups both in Ukraine and in the world;
- create profiles on social networks, where to place information on innovative ideas;
- create information blogs.

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Received: 24.05.2017

Reviewed: 06.06.2017

Accepted to publishing: 23.06.2017

**INFLUENCE OF WORLD TRENDS AND PECULIARITIES OF NATIONAL
ECONOMY ON DEVELOPMENT OF MEAT INDUSTRY OF UKRAINE**

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Abstract: *This article gives information on the recent developments, current state and prospects of meat and meat products market in Europe and throughout the world. The importance of meat products for the proper nutrition is characterized; the role of the meat and meat-processing industry in providing consumers with valuable meat products is stressed, these being rich with proteins and other nutrients noted. Prospects and opportunities for development of large transnational operators of the meat market and also of local meat processing enterprises these close to sources of raw materials are described. The characteristics of the machinery and raw materials bases of the meat industry of Ukraine as well as personnel potential are given. The detailed description of the dynamics of the development of food, including meat, industry in recent years, as well as current information about the technical and economic state of the meat industry in early months of 2017 are adduced.*

The conclusion is made that the conjuncture of the world and European market of meat and meat products is developing in such a way that there exists effective demand for these types of goods, and that the said demand will grow in the medium term with, the prerequisites for the growth of meat consumption in the domestic market of Ukraine being also evident. To realize the existing potential of the meat industry in Ukraine, it is necessary to increase the number of pigs and cattle, to reduce the energy intensity and material consumption of meat production, to provide it with modern technological equipment, and to ensure the welfare of our citizens, the latter being a prerequisite for the solvent demand inland.

Keywords: *food industry, meat processing industry, meat, meat products, fixed assets, production facilities, labor potential, exports, imports.*

JEL Classification: **F14, L10, M21, O14, O40**

Products of the slaughter animals and agricultural poultry processing belong to the number of principal sources of protein in the human nutrition. Proteins are necessary nutritive substances for the human organism. Their presence promotes vital activity of its tissues, forming new cells and enzymes. Proteins are also a source of energy for the human organism. Differing by amino acid nomenclature and quality, these are a part of contents of different products of vegetable and animal origin. The overall capacity of potential sources of proteins throughout the world depends upon the present natural resources together with the production technologies available, while the demand – upon the population parameters and the protein content of the food consumed [1].

According to UN assessment, the world population is to reach 9.6 billion by 2050. Sequentially the 60% rise in demand for foods and enhancing of their content are expected, and the said content shall be properly balanced. Inclining of pro capita revenues will stipulate the rise in demand for the products of animal origin, vegetable oils, sugar etc. World meat production is expected to reach 455

million MT by 2050. The parameter adduced may only be reached when the annual growth of production rate is no less than 1.3% [2].

Meat industry as a constituent of food industry carries out its economic functions of slaughtering cattle, pigs, other slaughter animals and poultry. Slaughterhouses are primary production facilities of meat industry these producing raw meat to ensure the demand of consumers and to provide meat processing enterprises with raw materials. Non-food raw materials and wastes are used for processing at the industrial enterprises of other specialization. Calculation of amounts of raw materials, food and non-food by-products by production of 1 MT of different meats is adduced in Table 1. Numerous personnel are employed at meat enterprises to fulfill technological operations the grade of their specialization being significantly high [3; 4].

Table 1. Amount of raw materials, food and non-food by-products by production of 1 MT of different meats [4]

Product description	Specification	Chicken meat, kg	Pork, kg	Sheep meat, kg	Beef, kg
Farm-gate product	Live weight	1712	1618	2255	2375
Intermediate product	Hot standard carcass weight	1216	1229	1060	1307
Wholesale product	Cold carcass weight	1179	1177	1017	1267
Wholesale/retail product	Retail cuts	967	906	895	887
	Edible offal	33	94	105	113
Retail portions (retail cuts + edible offal)		1000	1000	1000	1000
Hides		0	0	169	214
Pet food		17	84	34	30
Rendering material	Unprocessed meat, bone, offal	593	372	800	989
Rendering products	Protein meal products	154	53	152	257
	Tallow	73	109	156	154
	Blood meal	5	5	14	14

Along 20th century food availability in Europe was different. From the beginning of 1960-s to 1990-s the amount of meat on the market was increasing – especially of pork and poultry meat [5]. In 1990-s the availability of meat for consumers decreased throughout the European Union excl. Norway, Portugal and Ireland [6]. The reason for the said decreasing was not the change of consumers' tastes and preferences only but also very serious problems with food safety of meats: spongiform encephalopathy of cattle, pollutions with dioxin etc. [7].

Despite the mainly positive economic results of the meat industry of EU member states, major problems are characteristic for a number of enterprises – first of all, unsatisfactory profitability level. All over information about activities of the said enterprises is necessary this making it possible to fulfill economic and financial analysis for diagnosing their principal results and possible modeling their reorganization in time period, industry sector or territorial location context. For the purpose a number of measures as: routine analysis of account documents, math statistics methods and precedential comparison with the similar enterprises solving and having solved the problems of the sort are expedient [8; 9].

To assess economic activity of an enterprise over time the method of making out boot parameters is used, the said parameters being: tangible cost, salary expenses and fixed assets maintenance costs, total scores – sales result and stocking cost [10]. The indices of industrial prices according to EUROSTAT [11] data are used for the purpose.

Both in-land and transboundary trends for consolidation and merging of meat producing enterprises show themselves in the fact that the said enterprises are more integrated today – horizontally and vertically. The strategy meant implies minimization of short time fluctuation and risks. The definitions specified are valid for the most significant meat producing companies of the world: JBS S.A., Tyson Foods, WH Group (former Shuanghui International Holdings which acquired Smithfield Foods), Cargill Meat Solutions, Marfrig Global Foods, Brasil Foods (BRF), Danish Crown, Itoham Foods, Gruppo Cremonini, Teys Australia (joint venture with Cargill), Hormel Foods,

SuKarne, Nippon Meat Packers, ANZCO Foods (common property of Nippon Suisan Kaisha and Itoham in New Zealand), Minerva Foods, Sigma Alimentos, OSI Group and Maple Leaf Foods. Both production facilities and sales of the enterprises listed embrace several states each [12].

The necessity for global consolidation of meat and poultry processing industry to sustain competitiveness can be prognosticated. In the course of the said process transboundary mergers and acquisitions are expected to have preferences to avoid antitrust restrictions and constraints according to national legislations of a number of states. The trend is not certain to stipulate the growth of the husbandry production – taking the fact into account that family farms prevail now. The latter seems to be quite satisfactory for those consumers who dislike the globalized industrial manufacturing and also for local producers of meat and meat products together with other local markets operators. The localization of meat producing is expectative to cause local prices growth for such products, but, taking into account the share of the local facilities, average prices for meat and meat products will not significantly increase [13].

Developments of local processing facilities of agricultural materials incl. raw meats are promoted by locavores¹ movement these preferring to consume local foods – namely those produced, approximately, not farther than 150 km from the locations where they are consumed. And it deals not only with local patriotism but also with the possibility to avoid transporting live animals to slaughterhouses, distant as far as tens and hundreds kilometers from farms, and with providing local residents with job positions [14]. The issue of localization of producing and processing raw meats together with providing them to local and regional markets is not only and no so much in the lack of production facilities. The solution for the issue consists in creating the system of mutual trust and benefits based relationship of livestock breeders and meat processors, and also in the sufficient volumes of the effective demand for meat products among the local consumers [15].

Meat industry is traditionally one of the most highly developed sectors of food and processing industry in Ukraine. Basing both upon the traditional diet of the Ukrainians and upon the structure of the national agroindustrial complex within the frames of economic, geographical and historical context, the production of meat and meat products has been and still is of the utmost priority for the establishing food security of the Ukrainian state. Nevertheless, difficulties, the economic activity of the meat processing enterprises are connected with, cannot be omitted. The said difficulties are: scarce of high quality raw materials, lack of a well balanced system of material and technical supply, permanent growth of energy resources costs, higher competitive challenges from importers, lack of strategic management commonly known as an effective and progressive mean to control enterprises. Deficiency of effective means to resolve the problems of functioning and development of meat industry causes decrease in production volumes with simultaneous sufficient increase of prime cost [16]. Thus, to make sophisticated solutions for the economic rehabilitation of the meat industry permanent monitoring and objective analysis of its industrial and resource potential are necessary.

The issue of studying the actual state and development potential of food incl. meat industry is a subject of research of a number of the Ukrainian scientists: M.P. Sychevskyi, Y.M. Gadzalo, V.Y. Mesel-Veseliak, B.Y. Panasiuk, Y.A. Lupenko, P.T. Sabluk, A.E. Yuzefovich, D.F. Krysanov, A.H. Shpykuliak, L.V. Deyneko etc. In their works they gave full consideration to the issues of decreasing production volumes of meat and meat products, suggested the ways the food industry incl. meat processing and poultry processing industries encounters now [17; 18].

To define the ways to raise efficiency of the functioning of meat industry its potential shall be analyzed in comparison with other sectors of food industry as well as food industry in toto.

First of all, characterizing of technological equipment and other fixed assets of meat industry is necessary. For the period from 2013 to 2016 depreciation (wear) index grew for all the economic activities incl. production of foods, beverages and tobacco goods. For the said sector the wear-out rate of fixed assets reached 42.5% in 2015, exceeding the rate of 2013 the latter amounting to 47.0%.

Despite the numerousness of machine-building enterprises of Ukraine these being characterized by huge production rates and sectorial diversity, the number of the enterprises manufacturing

¹ Locavores – consumers preferring foods originating from the areas not very remote from the places the said consumers dwell. This is a new trend popular both in North America and in Europe.

machines for food industry is not considerable so that the demand for meat processing equipment is not fully satisfied. The great majority of such items are imported to Ukraine, the small-scale enterprises using mainly reconditioned equipment originating from EU member states. In recent years a trend has become dominating for the primary development of big engineering enterprises their specialization embracing complex construction of new facilities and also reconstruction of existing facilities, and the majority of the machines and equipment being installed are of foreign origin – and very often not new but reconditioned ones [19]. Nevertheless, a number of items can successfully be produced by the Ukrainian machine-building enterprises, namely the reliable equipment for slaughter and primary processing of animals and poultry, some items of the equipment used for manufacturing meat products etc. Perhaps, the fact shall be recognized that the Ukrainian meat processing equipment is inferior to the best foreign patterns concerning their specific amount of metal, reliability, automation level etc. The analysis of the demand of meat industry enterprises for the specialized technological equipment and the possibility of the Ukrainian machine-building to manufacture the said equipment makes it possible to conclude that the prospect of the Ukrainian machine-building for meat industry is in manufacturing a certain medium-technology items e.g. meat grinders (meat wolves). Enhancing of design and manufacturing quality of the said equipment is necessary to reserve this niche on the domestic market of machines and equipment and to stipulate the possibility to export such products to other markets. But as for now, bowl and flow cutters, vacuum sausage cases fillers, automatic brine injectors and other sophisticated machines are expedient to be imported – till the Ukrainian machine-building enterprises will reach the competitive level of quality and technical perfection of the machines specified [20].

In 2016 production facilities of foods, beverages and tobacco goods were loaded to 62.9%, while in 2015 the load was some lower reaching 61.7%. Those enterprises which manufactured foods only used their facilities by 63.8% in 2016, this exceeding the load in 2015 by 1.5%. The load of productive facilities in some sectors of food industry is specified at Figure 1.

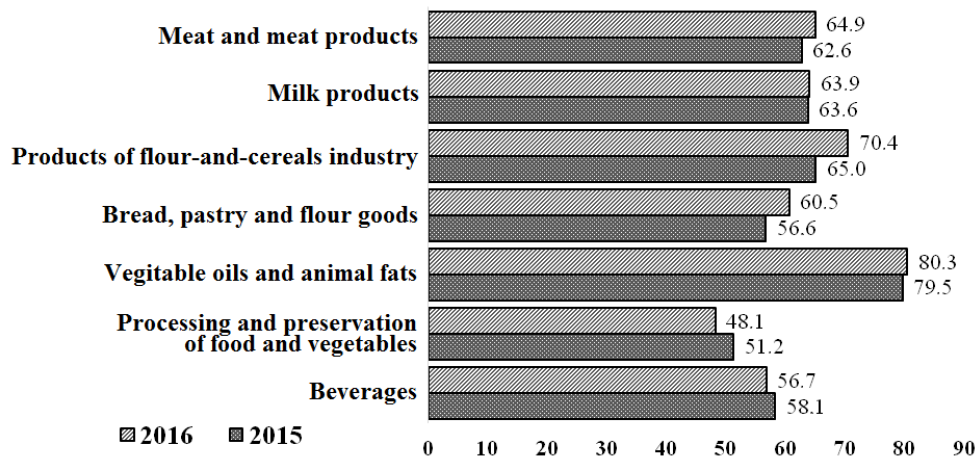


Figure 1. Load of productive facilities in food industry of Ukraine, % [21]

Comparing of the load of industrial facilities parameters of years 2016 and 2015 makes it possible to see that the said parameter grew for the majority of the sectors of food industry. The load of industrial facilities of the enterprises manufacturing vegetable oils and animal fats was 80.3%. The load of the industrial facilities of meat and meat products manufacturing enterprises in 2016 was as high as 64.9%.

From 2010 to 2015 the labor potential of food industry was decreasing the fact being confirmed by the charts of employee population behavior for the period – Figure 2. The employee population of the enterprises slaughtering animals and poultry, fulfilling primary processing of carcasses and manufacturing meat products for the same period declined by 1.6%. However, in 2013 employee population of meat producing and meat processing enterprises was 62.1 '000 pers. (the highest value for the assessed period), thus exceeding the value of 2010 by 24.5%. Employee population in 2015 counting up to 49.1 '000 pers. was by 20.9% lower than the value indicated in 2013. The above

considered parameter of employee population directly depends on the number of economically active enterprises. In 2015 this number decreased by 797 or 13% comparing to 2010. In meat sector the number of economically active enterprises decreased by 199 or 20.7% for the same period. In 2015 employee population of food industry was as high as 282.1 '000 pers. and 17% of them were engaged in processing meats and manufacturing meat products. To be compared: in 2010 employee population of food industry was as high as 358.9 '000 pers. and 14% of them were engaged in meat sector, in 2013 the values of both parameters were 347.9 '000 pers. and 20% correspondingly.

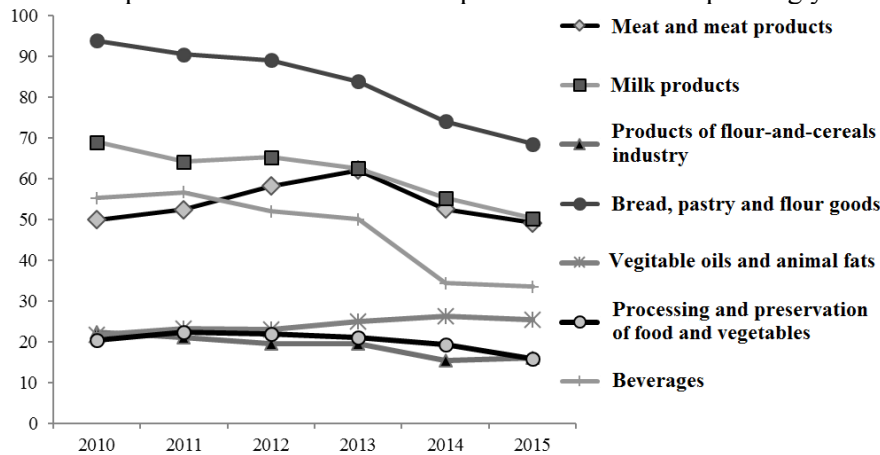


Figure 2. Employee population for the sectors of economic activity in food industry, '000 pers. [21]

Within the period from 2010 till 2015 the wage rate approximately doubled from 1927.8 to 3762.5 UAH per month the latter value being by 19.8% less than average wage rate in the industry of Ukraine and by 11.8% less than average salary rate in this state. For the period assessed wage rate in meat industry also approximately doubled – Figure 3. In 2015 average wage rate in meat industry was 3291.6 UAH.

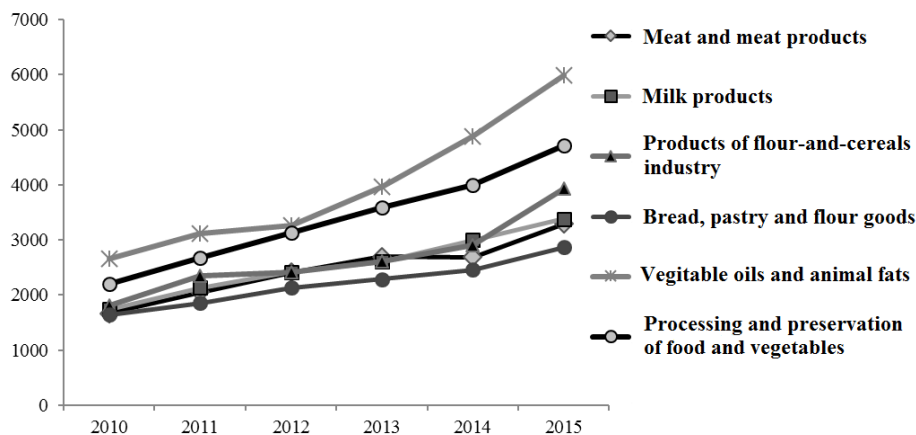


Figure 3. Behavior of average wages for the sectors of economic activity in food industry, UAH [21]

When assessing the raw materials base of meat industry one shall mention that production of all kinds of meats increased by 8% in the period of 2011–2015, by 45% in the period of 2005–2015 and by 40% in the period of 2000–2015. The most significant was the growth in poultry meat production, in the period of 2000–2015 this grew six-fold – from 193.2 to 1143.7 '000 MT annually, when pork production increased by 10% only, and beef/veal production decreased twofold – Figure 4.

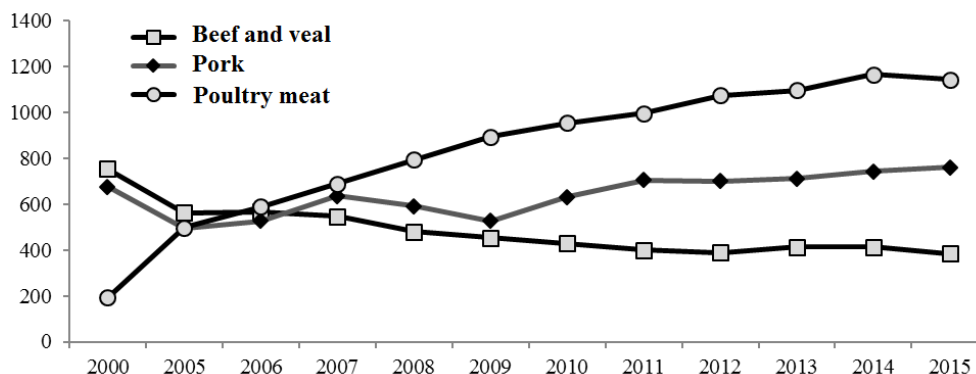


Figure 4. Meat production in slaughter weight, '000 MT. Values for the years 2014 and 2015 omit the territories temporarily being out of control [21]

Allover production rate of meat was 2322.6 '000 MT in 2015, 49.2% of it being poultry meat, 32.7% – pork, 16.5% – bee/veal, 0.6% – sheep and goat meat, 0.4% – horse meat and 0.6% – rabbit meat. The data adduced reflect, in common, the state of population of slaughter animals and poultry. At the beginning of 2017 the lowest cattle population was monitored – 3675 '000, but in February the value of the said parameter increased – up to 3770 '000. On January 1, 2017 pig population was 6689 '000, on February 1, 2017 – 6543.4 '000. In the period from 2001 till 2016 cattle population decreased by 60%, thus accounting for 3750 '000, pig population decreased by 8%, when poultry stock increased by 65%.

Analysis of total export and import values of foods and the products of animal origin incl. meat products in 2016 (Table 2) let us see the declining trend in production of the said products. The values specified neither meet the in-land demand nor correspond to the potentials of the Ukrainian husbandry and meat industry to export their products to solvent foreign markets. Decrease in cattle population and, correspondingly, of beef/veal production caused the deficiency of the most valuable raw material for manufacturing meat products. As for now, market operators dealing with meats and meat products have to import both live animals used as a raw material for meat processing industry and ready meat products.

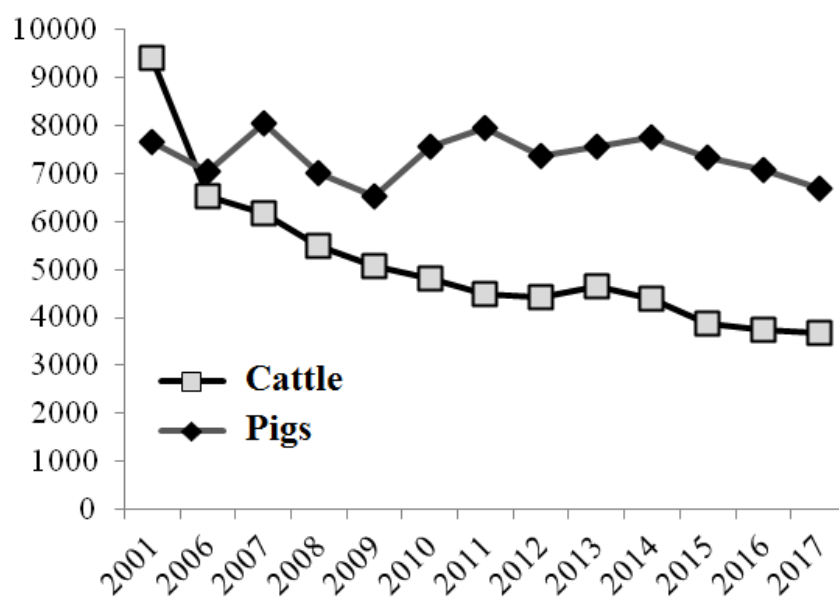


Figure 5. Cattle and pig population, '000, at the beginning of a year specified

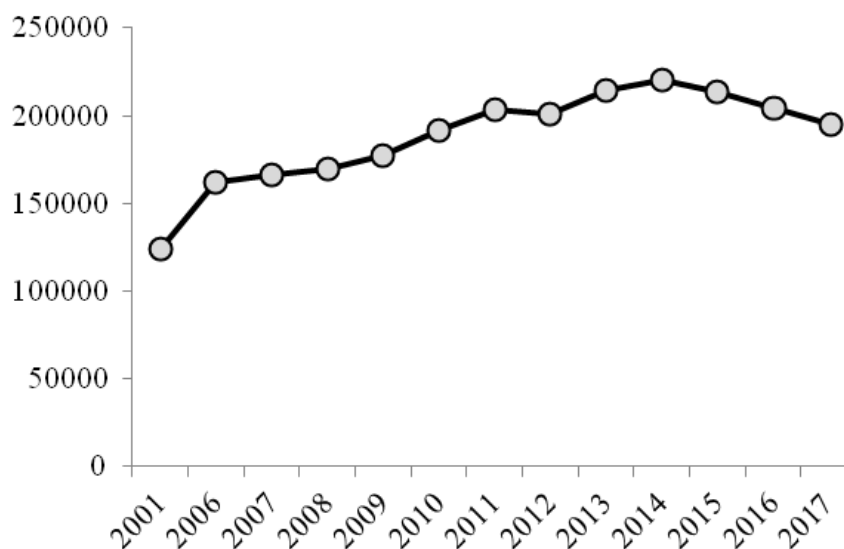


Figure 6. Poultry population, '000, at the beginning of a year specified

Table 2. Export and import of foods, products of animal origin and meat products in 2016 [21]

Code and specification of products according to Ukrainian nomenclature of goods of foreign economic activity [22]	Export			Import			Export surplus, '000 USD
	'000 USD	% to 2015	% to total volume	'000 USD	% to 2015	% to total volume	
Products of food industry total	15284296	105	42.0	3889974.1	111.7	9.9	11394322
I. Live animals; products of animal origin	775159.8	94.1	2.1	626323.0	114.3	1.6	148836.8
01 live animals	30910.2	120.6	0.1	57981.0	97.1	0.1	-27070.8
02 meat and edible byproducts	387789.3	102.7	1.1	80851.5	81.4	0.2	306937.8
05 other products of animal origin	8812.9	42.7	0.0	18087.3	99.1	0.0	-9274.4
IV. Ready food products	2450863.4	99.3	6.7	1733059.7	107.8	4.4	717803.7
16 products of meat, fish	14323.8	114.9	0.0	61724.7	145.4	0.2	-47401.0

Let us analyze the actual trends in production and consumption of meat and meat products in the beginning of the current year 2017. In common, production volumes of the products of meat processing in January increased – compared to January 2016. Production of fresh and chilled meats: beef/veal, pork and poultry meat exceeded the 2016 values by 73.6, 5.9 and 29.8% correspondingly, frozen beef/veal and poultry meat – by 58,7 and 18,8% correspondingly. Production of sausage products in January 2017 was 9.8% higher than in January 2016. However, production of frozen pork decreased by 16.3%. The comparison of the volumes of meat products in January 2017 with the corresponding volumes in December 2016 shows average 10 – 20% decrease for all the products excl. frozen pork. The volumes of fresh and chilled beef/veal decreased by 31.8%, frozen beef/veal – by 46%. In January 2017 года, comparing to January 2016, prices for fresh and chilled beef/veal and prices for fresh and chilled poultry meat increased by 13 and 12% correspondingly, prices for other kinds of meat – by 5% approximately. Comparing to December 2016 the most significant grows showed the prices for fresh and chilled beef/veal – by 4.6%, while the price for fresh and chilled pork decreased by 7%.

Meat consumption is expected to show certain growth in 2017. According to information adduced in the balance made up by experts of the Public association «Economics Discussion Club» [23] and characterizing demand and supply of meat and meat products in January 2017, consumption of meat products calculated as meat reached 228 '000 MT, this by 3 '000 MT exceeding the value of January 2016. Consumption of pork increased by 4 '000 MT while consumption of poultry meat and beef/veal decreased. The balance [23] prognosticates growth in pro capita consumption of meats from 51.4 kg in 2016 to 52.5 kg in 2017. The assessment is based on the rise of minimal wage rate, so that growth of consumers' incomes will let them buy more expensive pork instead of cheaper poultry meat. However, decline in demand for the low price meats is not expected. And the most valuable meats, beef and veal belonging to, will remain excessively expensive for average consumers.

Thus the conjuncture of global and European markets of meat and meat products is so, that there is solvent demand for the said kinds of products, this demand tending to increase in the medium term. There are also reasonable premises for the consumption of meat products to grow on in-land market. Meat and meat processing industry of Ukraine has the necessary potentials to raise the production of meat products – this concerning both volumes and assortment. Proper implementing of the said potentials is only possible when a number of rather complicated technical and economic problems are solved and the rise in pig and, especially, cattle population, proper optimization of specific energy consumption and specific amount of metal in meat processing industry, provision of the enterprises with comprehensive specialized technological equipment is achieved. Another important feature necessary for the Ukrainian meat industry to develop is enhancing well being of the compatriots, this stipulating necessary growth of in-land solvent demand for meat products, the proper nutrition being impossible without.

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Received: 29.05.2017

Reviewed: 09.06.2017

Accepted to publishing: 23.06.2017

PROSPECTS OF UKRAINIAN CONTEMPORARY INSTITUTIONALISM

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Abstract: *A promising area of the research of institutional economics of Ukraine is the research of its methodology and history, covering the process of the formation, development, evolution of institutionalism in the totality of its components and options. Problems and prospects of the institutional economics in Ukraine are very important and this urgency is growing due to the fact that the practice of market changes in the Ukrainian economy in recent years is evidence of the lack of the institutional approaches to solving today's theoretical and practical problems.*

The article offers to look at some current problems and issues of Ukrainian institutionalism as one of the modern economic theories, that defines the transition of the Ukraine's economy to a market system and, later, to a postindustrial society - the economy of knowledge.

The analysis of problem of forming of institutional principles, presence of row of institutes, gives possibility to understand and explain social processes that take place in our country, see the prospects of , b25community development. Undertaking into account of achievements of all directions of development of economic idea in the conditions of a variety of the modern world threatens serious consequences – to the removals of those aims, that was put before itself by society.

Keywords: *institutionalism, institute, basic institutions, transaction costs, institutional environment.*

JEL Classification: *A10, B25, P10, P26, P48*

Relevant information

The problems of the contemporary institutional, social and economics transformations of the Ukrainian society are an object of research for all modern scientists. The subject of institutionalism, its methodologies, stages of development, structure, place and role in the economic theory, current state, problems and prospects of development is a relevant field of studies. In addition, the necessity of studying this topic is rising because of the fact that last few years the practice of market changes shows that there are not enough institutional approaches to solve current theoretical and practical problems in the Ukrainian economics.

The revival of institutionalism in the early twenty-first century and strengthening its influence on liberal and Keynesian concepts, gave a chance to many Ukrainian scientists (economists as well as historians) to describe not only the social aspects of economic life but also to study and explore the institutional environment, influence of its subjective factors on the development of entrepreneurship and functioning of the mechanism of the national economic.

Analysis of key studies and publications

Since the end of the twenty century, the interest in institutionalism as the direction of modern economic theory raised sharply. Scientific researches of theoretical and methodological positions of the institutionalism are highlighted in dissertations and others scientific publications in the field of institutional economics. The most known authors of the scientific monographs are: S. Arhiyereyev, T. Gaidai, V. Dementev, G. Zadorozhnyy, V. Lypov, P. Mazurok, O. Nosova, B. Odyahaylo, O. Prutska, R. Pustoviyt, A. Tkach, O. Chausovskyy, O. Shepelenko, A. Chukhno, V. Yakubenko, O. Yaremenko etc.

A. Grytsenko, I. Malyi, V. Tarasevych, A. Chukhno, O. Yaremenko and others are the scientists who studies and researches issues related to the complexity of modern methodology of institutionalism and subject-methodological features of its components. Professor A. Grytsenko and representatives of her scientific school created a new scientific field. It is called institutional architectonics. This area is a combination of the deep knowledge of institutional structure, the art of the institutional creation, and the general plan of creation the integrated system of the institution.

Such periodicals as "Economy of Ukraine", "Economics", "Economics and Law", "Economy and prediction" and others include discussions of all issues of institutional economics.

One of the most prospective directions of the research in the theory of the institutional economics in Ukraine is a research of its methodologies and history. This area includes the processes of formation, development, and evolution of the institutionalism, its features and options. The most known scientists that work in this area are: L. Gorkina, S. Zalupko, P. Leonenko, P. Yukhymenko, A. Maslov.

The **main purpose** of this article is to highlight the current problems and issues of Ukrainian institutionalism as one of the modern economic theories, which defining the transition of Ukraine's economy to a market system and, further, to a postindustrial society - a knowledge-based economy (knowledge economy).

Research Methodology.

The appearance of institutionalism as one of the modern economic theory was possible due to the transition from the domination of private property and free competition to the increasing of the socialization of the economy, its monopolization and nationalization.

Modern institutionalism, including Ukrainian, was appeared and developed in the form of the neo institutional economics due to the theory of property rights and transaction costs, public choice of the institutional changes in the new economic history (cliometrics) and human capital. Nowadays such issues as the questions of the existence and development of the basic institutions, the institutional problems of the economic regulation, the institutionalization in a transformation period, the formation of institutional environment and sustainable economic growth are in the priority of the institutional process.

Professor A. Grytsenko and representatives of her scientific school created a new scientific field, called institutional architectonics.

Architectonics (from the Greek. *architektonike* - the art of building) – is the term used in architecture, literature, and geology. In a broader sense architectonic is the main principle of structuring, communication and interdependence of the elements of the whole. In economic theory, institutional architectonics is a "fundamental structure of the institutes, consisting of the rules, norms, attitudes, traditions, institutions and other social entities in their relationship with a nature and general aesthetic plan of the integrated social system" [4, p. 9, 27].

Representatives of the idea of the institutional architectonics, based on their methodology, have proved the new way of the institutions` development. The main idea of this approach is that scientists define the concept of term "institution" not only as a part of the society (part of the socio-economic reality) but also as a society in the institutional aspect. All institutions are exploring as they are a part of any organization, technique and technology, any object of human culture, the way of thinking and so on.

Institutions are the dynamic ways to coordinate the interaction of economic entities and business units. In addition they define the relationship of these units and entities with the historical states of the society (path dependence). At the same time, institutional forms as samples approved in practice (practice and model patterns), methods, and norms of behavior that are caused by the specific socio-economic and technological conditions of the society, are fluid and relative [5, p.94]. This means that institutions have internal dependence on past experience and are demonstrating the inconsistency between the "formed norms and mechanisms of social interaction and organization of production" [6, p.70].

The main features of institutions are that they express themselves through the:

- 1) strategic and operational goals of the economic policy of advanced development;

2) rules and regulations of economic activity and social initiative for the significant improvement of standards and quality of life;

3) innovative type of behavior of economic agents [9].

O. Moskalenko proposes to think about the institutional structure model of advanced development in developed countries as about the set of such institutions:

- political and economic institutions (they define the mechanism of solving social conflicts based on social compromise and consistency of government, business, public and individual interests);
- institute of a goal formation;
- institutions of a science and education (institutions of a human development);
- institute of an information and knowledge (sufficiency of an information);
- market process (traditional resource markets; labor market - the market of intellectual (creative) labor; capital market; human capital market, intellectual capital market);
- institute of the innovative competition (competitive activity);
- institute of economic efficiency and social justice;
- ethical business culture (independence of economic agents in decision-making, freedom and human dignity). [9, p.16].

Representatives of the institutionalism in Ukraine (T. Artemova, A. Grytsenko, I. Malyi, V. Mandybura, S. Stepanenko, etc.) among the basic structures of economic system are also define such institutes as:

- the institution of property,
- the institution of management, based on the economic value,
- the institution of distribution.

A transactional sector, an economic power, a fiscal, banking, and monetary systems, taxation and others are separate components of the economic system. Scientists are analyzing these structures and components of the economic system from the point of institutional architectonics [8, 4].

The institutional construction of the economy happens all the time. Especially intensely this process happens in the transformation period. Privatization of society (reforming institution of the government) is the most essential part of transformations in Ukraine. One of the main functions of the government in such period is creating an informational space, which prevents distortion of current market information to business units. This also includes the reducing of the uncertainty of behavior of these units by reducing risk. In addition, compiling of regulation and mandatory requirements that restrict the improper execution of contracts between the units and coordinate their joint efforts to achieve a mutually beneficial outcome [7, p.50-55].

The problem of institutionalization of the economy in transformation period is linked to the issue of forming the institutional environment in Ukraine. The spontaneous transformation of the institutional environment and import the institutions that exist in countries with more developed economies are the main reasons for inhibit the market reforms in our country by the majority of Ukrainian economists.

Factors that inhibit the forming of the institutional environment in the national economy of Ukraine are:

- missing of the new institutions, which could replace the old one and provide the self-sufficiency of the economy and social stability of society;
- the weakness of government institutions. This is generating shadow economy;
- a large number of the inefficient institutions;
- a desire of some institutions to receive the exclusive privileges;
- the bureaucratization of the institutions.

In the institutional environment, government should provide the movement, coordination, redistribution of the material, financial and information flows in the economy. This will allow using the limited economic resources more effectively by all business units.

The increasing of transaction costs and the need to save them causes the government intervention in the process of institutionalization of the economy. This aspect highlights in the works of S. Arkhiyereyeva. He analyzed the phenomenon of transaction costs and made their classification. He also discovered their economic role, their relationship with the efficiency of production and market

equilibrium. In addition he explored the impact of institutional and social capital on the peculiarities of market transformation; discovered the irregularity of transaction costs` distribution among different population groups, which causes the property stratification in the countries with transitional economy [2]. He also developed a methodological framework for better understanding of the limits of transaction sector [3, p. 15-20]. The author proves fundamental possibility and practical expediency of implementation the correction of national accounts by institutional sectors. This allows getting information about the transactions institutional sector directly from the statistics of national accounts.

A. Efimenko highlights the analysis of the relationship of institutions and transaction costs. From his point of view, the institutions are reducing transaction costs and transforming these costs to their own income, through appropriate specialization and professionalism. The competition between institutions (the desire to get more economic benefits) leads to higher transaction costs for the institution and society as a whole. This process leads to the increasing of conflicts inside of the institution as well as between different institutions (that are working in related fields) and their non-institutional actors (those who are using the services of professional intermediaries) [7, p.51]. As we can see, without the intervention of the government (consider the rights of each institution), these institutional conflicts will not be resolved. While the institutions resolve their internal conflicts based of their own rules, regulations and standards they do not need the government intervention. But at some point of time, the institutions are not able to organize their relationship along. This leads to unjustified increasing of internal transaction costs for administration. This also can cause the criminalization of activities. Then there is a need to impose the institutions with more serious limitation system. This system includes sanctioned and protected by the state norms and rules of conduct.

Trajectory of society`s development, except legislation, defines the relationship between effective and ineffective institutions. A. Alchyan, following the evolutionary hypothesis, says that competition among institutions leads to the elimination of "weak" and helps to survive those institutions that provide the greatest efficiency in the coordination of economic agents [1]. D. North believes that the theory of technological change is very important. According to him, changes in institutions are caused by changes in prices and ideology. It is important to create a system of social control over the economy for social institutionalism. Following these scientists, the forms of social control include: regulative government`s influence on large corporations, competition, pricing, employment, currency, and finance [10]. The government should enhance its role of arbitrator as this position provides the compliance of general interest and the stimulation of individual initiative at the same time.

To what degree Ukrainian institutionalism take shape as independent research program as part of institutional paradigm will depend on whether its representatives will propose a new research methodology of studies of transition processes, design a new economic policy, which would take into account all issues from theoretical and practical sides.

Results. Nowadays in Ukraine, there is a lack of institutional approaches to solving theoretical and practical problems that are associated with the transition of the state to a market system and, further, to the knowledge economy. Such questions as: the existence and development of basic institutions, institutional problems of economic regulation, institutionalization in a transformational period, the formation of institutional environment and sustainable economic growth in the context of the institutional process – are very relevant and give the opportunity to all representatives of the theory of modern Ukrainian institutionalism to create a new theory of economic development.

Conclusions and prospects. The main condition for successful economic modernization in Ukraine is to bring the institutional environment in one line with goals and objectives of this modernization. The economy needs modern institutions that are aimed at sustainable development of society. These modern institutions assume the strengthening the role of the government in order to stimulate the actions of those business units that provide all kinds of cost reduction considering the using of opportunities of market situation and the development of national production potential.

One of the challenges of modern institutionalisms is the definition of the term "institution" as not only as a part of society (socio-economic reality) but also as a society in the institutional aspect. That is why it is proposed to consider the institutional structure of country`s development as a set of

political and economic institutions, institute of a goal formation, institutions of a science and education, institute of an information and knowledge, market process, institute of the innovative competition, institute of economic efficiency and social justice and, in addition, the basic structures of economic system: the institution of property, the institution of management, the institution of distribution.

The most essential part of transformations in Ukraine is a privatization of society, which means the reform of the state. The role of the state is changing during the process of institutionalization. In the institutional environment, the government should provide the movement, the coordination, the redistribution of material, financial and information flows in the economy. This will allow using limited economic resources by all business units more effectively. Government intervention in the process of institutionalization usually is caused by the increasing of transaction costs and by the need to save these costs. When institutions are not able to organize their relationships, when there is an unjustified increasing in internal transaction costs for administration, and increasing in criminal activities, then there is a need to impose need the institutions with more serious limitation system. This system includes sanctioned and protected by the state norms and rules of conduct.

Trajectory of society's development, except legislation, defines the relationship between effective and ineffective institutions. Changes in institutions are caused by changes in prices and ideology. For the modern social institutionalism it is important to create a system of social control over the economy. Regulative government's influence on large corporations, competition, pricing, employment, currency, and finance are the forms of social control.

Analyzing the problems of formation of institutional framework and environment, learning the current institutions, scientists are trying to understand and explain the social processes that are taking place in our country, to see the prospects for social development. Neglecting of achievements in all areas of economic theory, in terms of the diversity of the modern world, can lead to the distancing from the society's set of goals.

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Received: 30.05.2017

Reviewed: 07.06.2017

Accepted to publishing: 23.06.2017

**MODERNIZATIONAL IMPERATIVE OF THE DEVELOPMENT OF THE FOOD
COMPLEX OF UKRAINE**

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Abstract: *The article focuses on the principles of efficient utilization of the Ukrainian food complex modernizational potential in the context of ensuring food security in the country and supporting economic growth in order to improve wellbeing of the people. Presented is the organizational-economic mechanism for modernizational development of the food complex with determination of key blocks to support innovative processes in the food complex.*

Based on analysis of statistical data and recent developmental trends in the food complex and economy in general suggested are key principles and main directions for improvement of the situation with food production and efficient utilization of existing potential in the sector. Innovation-investment and knowledge generation efforts are stressed as key in obtaining and sustaining economic growth throughout the food complex and entire economy.

Key words: *modernization, innovation, food complex, agriculture, food safety, social-economic development, transformations, modernizational potential.*

JEL Classification: Q18, Q16

In the context of transformational changes in the Ukrainian economy, the social, economic and political significance of the regional territorial-production systems is constantly growing as relates to the efforts aimed at resolving the most pressing social-economic problems which require more active economic activities focused on sustainable economic growth. Among such comprehensive systems in the country the leading role is taken by the agro-industrial complex which importance derives from the fact that it concentrates one-third of production facilities, one quarter of economically active population, and produces close to 20% of the gross national product while generating up to 70% of the retail trade. In the heart of the agro-industrial complex of Ukraine lies the food complex as an integral complex regional system which structurally comprises agricultural production and food processing industry together with the food market. Food complex is explained as a combination of technologically inter-connected functionalities of several specific economic domains united by the common objective and focused on provision of food products to satisfy respective needs in the country. Its adequate level and equilibrium in functioning of its components stipulates the guarantee of the food security of the country.

The key objective of the food complex development as an integrated independent system is the timely provision of population in a region with food products in the amount and scope, assortment and quality which effectively correspond to the adequate consumption norms. Thus, the key tasks of the complex include: determining the needs of people in a region as relates to food products; identifying the sources of food products' supply to consumers within required timeframe; regulation of food production both in fresh and processed conditions within the boundaries of a regional food complex; development of regional food markets; establishment of food banks (funds) and reserves; ensuring easy access to food products at the markets to all social groups of the population.

The unique and powerful natural resources that Ukraine possesses allow for effective development of the food complex with specialization on food products development which is closely related to increase in the level of wellbeing of the people. However, at present the level of food complex development can not be recognized as satisfactory because of poor material-technical support, outdated technical-technological base which does not meet modern requirements for market

economy development, low productivity of the food sector, poor structure of the food market, insufficient investment-innovative activities of economic entities, low competitiveness of food products, excessive differentiation and disproportions that slow down efficient usage of available resource potential. Thus, quite pressing becomes the issue of developing conceptual principles and practical efforts aimed at substantiating the prospects for development of the food system in the country on the basis of comprehensive assessment of its key components, specific features and peculiarities of transformational processes as well as re-orienting major developmental trends into progressive modernizational direction.

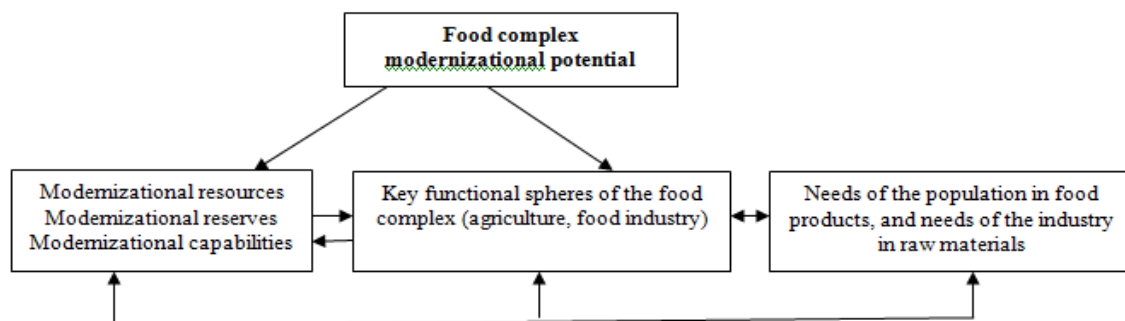
Achieving such goals in the context of ensuring viability and sustainability of the food complex for the future is closely connected with the need to outline main guiding targets which shall include the following aspects: modernization, investment activities, innovative advance, development of the scientific-technical progress, increased efficiency and competitiveness of food products with due consideration of modern challenges and risks. So, modernization presents renewal of the production based on modern requirements, transformation, reinvention, progressive changes, structural shifts in the economic system of the complex on the basis of more active and efficient investment-innovative activities. This is the process of quality changes in the food complex development under the influence of knowledge generation and large-scale application and implementation of innovations in key spheres of its functioning.

Despite its importance, the innovative activities and modernizational processes in the complex (same true for the entire economy) have not yet achieved necessary positive dynamics, although some successful shifts can be still observed. This is confirmed by the world ratings of evaluating innovation potential and technological and innovative competitiveness, namely calculations made within the global competitiveness index, global innovation index, European innovation index, where Ukraine is given quite a good place. According to the data from the World Economic Forum on global competitiveness for 2015-2016 Ukraine takes the 79th place among 140 researched countries with the following specific ratings based on: market capacity - 45th place; higher, school and professional education - 34th place; medical care - 45th place. However, deterioration of the situation is observed in Ukraine based on such criteria as: macroeconomic environment; financial market development; infrastructure development and technological readiness (3).

As regards the innovation activities, according to the global innovation index, which in 2015 covered 141 countries and used 79 indicators throughout a whole spectrum of innovative activity parameters, Ukraine moved to the 64th place by improving its positions in the following areas: required institutions, human capital, business expertise, creativity, market indicators (previous market indicators placed Ukraine in the 89th place (4)). However, the level of investment-innovative activities in the country as a whole, and in its food complex specifically, is far from satisfying modern requirements and corresponding to existing available reserves and capabilities. Obviously, general indicators and indexes for the country as a whole vividly reflect the situation in the food complex as well.

The key driver for strengthening the country's standing in the world and improving its territorial-production complexes shall be the rapid social-economic development on the modernizational basis, accumulation and consolidation of modernizational potential, notably in food complex. Based on existing, though insufficient, scientific works on the substance and definition of modernization potential, and taking into consideration some corrections and adjustments, the following explanation can be produced to determine the modernizational potential of the food complex: it is the combination of available and potential resources and reserves of production renewal and improvement through advancing and further development of knowledge and science-intensive technologies aimed at creation of new products and services as well as organizational mechanism of their implementation. This is such part of investment sphere which includes target functionalities of several domains as a combination of scientific-technical, production-social, personnel-intellectual, financial-economic and cultural-educational capabilities required to effect transformational-modernizational development of the country and its regional systems.

In very general terms, the chart of the food complex modernizational potential interconnection with results of its performance can be presented in the following way:



The establishment of the innovation model of economic development in the country depends on the extent of fullness and efficiency of its modernizational potential usage as well as potential of its regional structures, namely: amount of financing channeled into scientific and scientific-technical activities; level of innovative-modernizational development of industrial enterprises; dynamics of new products development and production; existence of solvent demand for modernizational products; substance and scale of transformational-structural changes and their effectiveness.

All aspects of investment and investment-modernizational character of the food complex development grow in importance in the context of existing steady negative trend of its functioning, especially its raw material component (table 1). Although dynamic characteristics of the food complex development and volumes of food production in general enjoy small growth tendency (from 2015 until 2016 - by 1,7%), the raw material component has been on a downward trend since 2014 with continuous fall of agricultural production volumes on a yearly basis (compared to the previous year): in 2014 - by 5,6%; in 2015 - by 4,7%; in 2016 - by 1,7% (1). In the processing component of the complex, against the general positive dynamics of relative food industry growth, in 2014-2015 the production fall has been observed as regards such important products as: sugar - by 29,6%; sunflower oil - by 7,3%; sausage products - by 9,7%; milk - by 1,3% (2). So, sugar production per capita, for instance, fell from 47,7 to 34,1 kg, and the general level of food products consumption, as the resulting indicator of the food complex development, has been on a downward trend of significant and steady decline in key groups of products due to the entrenched deterioration of production efficiency indicators. Thus, meat consumption per person per year fell to 51 kg in 2015 (from 56 kg in 2013), milk - from 221 to 210 kg, sunflower oil - from 13,3 to 12,3 liters, fish - from 14,6 to 9 kg (2), which is a vivid indication of struggling situation in the complex and the need to effect improvement measures on the basis of, first of all, more active investment-innovation activities.

Table 1. Food complex and its components' production dynamics (billion Hrn.)¹

Years	Products			Dynamics in % compared to the previous year		
	Agriculture	Food industry	Food complex	Agriculture	Food industry	Food complex
2010	194,7	193,0	387,9	-	-	-
2011	233,7	222,4	456,1	120,7	115,2	117,6
2012	223,2	257,6	480,8	95,5	115,8	105,4
2013	252,9	261,7	516,4	113,3	101,6	197,4
2014	251,4	302,4	553,8	99,4	115,5	107,2
2015	239,5	390,6	630,1	95,3	129,2	108,9
2016*	235,4	403,1	641,5	98,3	103,2	101,7

¹ Source (1, 2)

* "Uryadoviy kurjer", № 68, 2017

The investment activities and its dynamics in the food complex in general, as an indicator of economic efficiency, have not yet been able to improve efficiency of such process. With regard to capital investments, which overall size for the economy in 2015 was only 98,5% of the 2014 level, there has been observed a decreasing trend in the food complex which resulted in significant reduction of cattle facilities put into operation and scaling back of bread, sunflower oil and meat production

capacities (2). Lack of necessary reproduction resulted in increased wear and tear of key production means with its critical threshold long past 50%. Therefore, further development of the food complex aimed at ensuring increased volumes of food production, elimination of disproportions in functioning of its major components and with the key objective of stabilization and gradual economic growth requires serious transformational-modernizational changes in order to successfully resolve the issues of its sustainability and viability.

Transformational-modernization advance of the Ukrainian food complex is strongly dependent on its comprehensive systemic changes and shifts as well as component elements of these processes, namely the efforts on restructuring, re-organization, reforming, reconstruction, re-engineering, re-investments as key and effective drivers of changes and reinvention of the various spheres of economic activities. It has to be stressed though that in the core of these processes lies the very modernizational drive associated with renewal and re-invigoration of respective components of the food complex structure.

Modernizational activities, same as innovation activities, represent a single-function process aimed at renewal of the main spheres of economic activities, although they have some significant differences. Thus, if the main objective of innovation activities is the improvement of production processes through development and implementation of new or extensively modernized machinery, technology or products, enhancing of already existing products manufactured earlier as well as scientific-technical research based on the existing knowledge, the modernizational activities, in its turn and in response to the challenges of modern times, relates to comprehensive reconstruction of the organization and management of production, while its resulting products are not simply of an improved character but rather of a completely new nature and produced on the basis of the knowledge economy, notably information and communication technologies, biotechnology and nanotechnologies. The target objectives of the modernization and its key tasks shall include the following: increased efficiency, competitiveness, and ultimately the food security of the country and its regions; optimizing transformational processes that should be based on the scientific-technical progress achievements and knowledge generation; expansion of the scale of implementation of new machinery and technologies as well as new product types; enhancing investment activities as important components of the new stage of economic reforms.

Modernization, as the process of re-invention and renewal and as an integral system prompting the improvement of existing realities, presents a very complex and sometimes controversial phenomenon which impacts and changes not just main directions of the economic development and territorial-production complexes, but also produces an important influence on the society in general. Such activities, as a process of changing quantitative parameters of specific system, functions and substance of some spheres as well as optimization of conditions of such transformations, and also as the process of development and accumulation of positive changes, produces vast impact on the social processes. Such impact produced by the food complex modernization is well observed in macroeconomic dynamics, production structure, development of scientific-technical progress, institutional mechanisms, management activities, environment, and social stability.

The basis of formation and development of the modernizational potential of the food complex comprises investment and innovation potentials whose successful realization dictates the scale, structure and operation of the modernizational potential. The integral elements of the target component-functionalities of systemic organization of the food complex modernizational potential include: scientific base (fundamental and applied research); pace of the scientific-technical progress (new machinery and new technologies), knowledge generation and development of the knowledge-based economy; human capital potential (highly-qualified personnel, intellectual and creative capacity); management sphere and institutional environment; financial basis; development of infrastructure; institutional and legal support; informational resources. Framework of such components, through their interconnection, synergy and consistency, should guarantee efficient operation of the food complex on the basis of modernization.

It is quite difficult to identify and detail all functional components of the modernizational potential with detecting their exact scale, character and peculiarities of dynamic development because of the huge amount of data as well as the lack of significant part of statistical information. However,

taking into consideration that the results of scientific-technical activities and innovation technologies based on introduction of new knowledge present one of the main resources that determines the pace of development and guidelines for the food complex economic growth, the generalized evaluation of the received results is possible with the help of the following spectrum of indicators: assessment of scientific organizations and available personnel for the scientific sector of the country; assessment of performed and in progress scientific and scientific-technical research works; assessment of creation and introduction of scientific and scientific-technical products; financial support for the scientific sphere. In this context it is worth paying attention to the volume of scientific and scientific-technical works performed by organizations based on their specialization; number of specialists involved in such works; general number of scientific organizations; number of industrial enterprises that have been involved in innovation activities; number of implemented innovations at industrial enterprises, including those new to the market, and new only for specific enterprises; general number of all enterprises that implemented innovations, including waste-reducing and resource-saving ones; number of implemented new technological processes at enterprises; assortment of realized innovative types of products.

Regrettably, almost all indicators of innovation activities suffered downward trend. So, generally in the country the number of organizations performing scientific and scientific-technical research works has been steadily decreasing with average yearly fall of 2-3% (1303 in 2010, and 978 in 2015). The same proved to be true for the number of personnel at scientific institutions: fall from 141 thousand individuals in 2010 to 101 thousand in 2015. Ever more difficult situation is observed in the food sector: in one of agro-industrial macro-regions of the country - Polissya (Vinnytsya, Ternopil and Khmelnytsk regions) the number of innovatively active enterprises in the food industry decreased from 67 to 18, with implementation of new technologies falling from 28 to 13, and assortment of new products being reduced from 75 to 57. This, obviously, led to significant fall in the volumes of sold innovative products (based on the data from oblast statistical departments).

Analysis of the innovation-modernizational progress in the food complex components demonstrates that based on many indicators there exists serious lack of active investment efforts. Also poor looks dynamics of such important indicators as the number of innovatively active enterprises, organizations performing research and development activities, people employed in scientific-research and design works, volume of implemented new technological processes and creation of new types of innovative products. Based on statistical data the portion of enterprises producing food products that introduced innovations in 2015 was just 16,8% of the total number of all enterprises, including those that implemented innovative processes - 8,1%. Among them enterprises that introduced waste-reducing and resource-saving techniques were only 2,0%, and produced innovative types of products - 9,5%; which reflects quite negative general situation in this sphere (2, 5).

Introduction of new technological processes at the enterprises producing food products in 2014 occurred at 231 facilities, and in 2015 - only in 116 facilities (fall of 30,7%), and moreover only at 41 such facilities those were waste-reducing and resource-saving technologies, a number which in previous year was 44. As relates to enterprises that implemented new innovative types of products in 2015, in the food industry there were 455 such facilities (in 2014 - 723), with 63 (113) products intended for the market and 387 (610) products for enterprises which demonstrates significant slowdown in general innovation processes (2). Concerning specifics and character of other innovative processes in the food complex it has to be said that they have also experienced negative dynamics and falling indicators over the recent years.

Elimination of negative trends in the innovative-modernizational development of the food complex and improvement of operation and efficiency of its components requires re-orienting and profound changes in its activities. In the agrarian sphere of the food complex, according to the world trends, the key directions of the modern innovative-modernizational activities should be agro-biotechnologies (genetic modification, crops selection to withstand various negative factors, production of bio-fuel, development of bio-pesticides, bio-fertilizers, ferments, etc.). Also important should be the development of innovations in ecologically oriented systems of land-tilling, farming and agricultural techniques in order to preserve and increase level of efficiency in using agrarian resources. No less significant and necessary remain efforts on expanding already existing progressive agrarian

technologies, especially organic farming, soil protection systems, development of new seed kinds and hybrids, new farming techniques, new breeds of cattle, progressive cattle forage systems, usage of bio-fertilizers, introduction of efficient market technologies.

Among the priority directions of the innovative-modernizational development in agriculture, in the context of the general strategic priorities of the state, the following should be specifically outlined: development and implementation of technologies of adaptive soil-protective farming; technologies for production, conservation and processing of high quality vegetable products; technologies for production of diagnostics items to identify problems in plants and cattle as well as means of their protection; technological renovation of the production facilities in cattle breeding; development and implementation of modern biotechnologies in plant cultivation, cattle breeding and veterinarian activities.

Further efforts will be needed and should be intensified in scientific research of respective Ukrainian institutions in the following areas: farming, land reclamation and mechanization, plant cultivation, zoological machinery, veterinary medicine, agrarian economy and food production in order to ensure increased efficiency of the food complex development.

In the sphere of agricultural raw materials' processing and food production the key objective should be development of new technologies aimed at obtaining more healthy and safe food products, including both development and utilization of new equipment and technological lines presenting know-how as well as bio-technological and nano-technological production processes with proper control over their safety and quality parameters. Fundamental task for the food industry of the food complex is the creation and implementation of progressive processing technologies for food materials, food products conservation and transportation methods.

The food industry, as the final stage of the food complex development, is characterized by specific technologies of innovative-modernizational activities, especially resource-saving and low-waste technologies with minimum waste and maximum output; technological processes with reduced production cycles and minimal losses of quality characteristics of products; and also technologies for developing new packaging lines and boxing materials. The whole complex of technologies, as a system of conditions, forms, methods and means of resolving set tasks as per each main sphere of the food complex, and their development and utilization require formulation of a special organizational-economic mechanism which should ensure their modernizational advance and successful results (Chart 1).

Analysis and evaluation of the modernizational potential of the food complex and mechanism of its realization shall be based on the strong combination of statistical and dynamic approaches. Statistical approach determines the current state of the potential, influence of internal and external factors as well as performs retrospective and current analysis of the potential, processes of its utilization which creates necessary pre-conditions for identifying prospects of its development and build-up. Dynamic approach provides prospective analysis and prognosis evaluation of the potential on the basis of detecting changes already occurring within it and forecasting potential ones. The efficiency of the modernizational potential of the food complex can be presented as the ratio of the volumes of sold modernizational products to the general amount of modernizational expenditures. The result of analysis and evaluation of such potential shall be the adoption of measured and substantiated management decisions concerning its further functioning.

The basic principles of the food complex development in the context of modernization can be determined as following: increased efficiency of investment-innovative activities in order to enhance the ratio of prospective successful sectors; increased number of innovatively active enterprises which produce and implement innovative and modernizational products; renewal and replacement of production facilities with introduction of new equipment and machinery; gradual introduction of new comprehensive progressive technologies, especially resource-saving ones as well as nanotechnologies; enhancement of new product ranges of innovative-modernizational type, increase in volume of sold new products; formation of efficient system of implementation of scientific developments and inventions into practice; more extensive engagement of intellectual potential in order to establish modern network forms of production optimization; increase in the pace of innovative infrastructure development through creation of such structures as innovation and technology transfer centers,

scientific parks, clusters, strategic alliances, technological towns, business incubators, innovative-industrial groups; support development of small and medium sized innovative enterprises; informational support to the food complex development on the basis of modernizational principles.

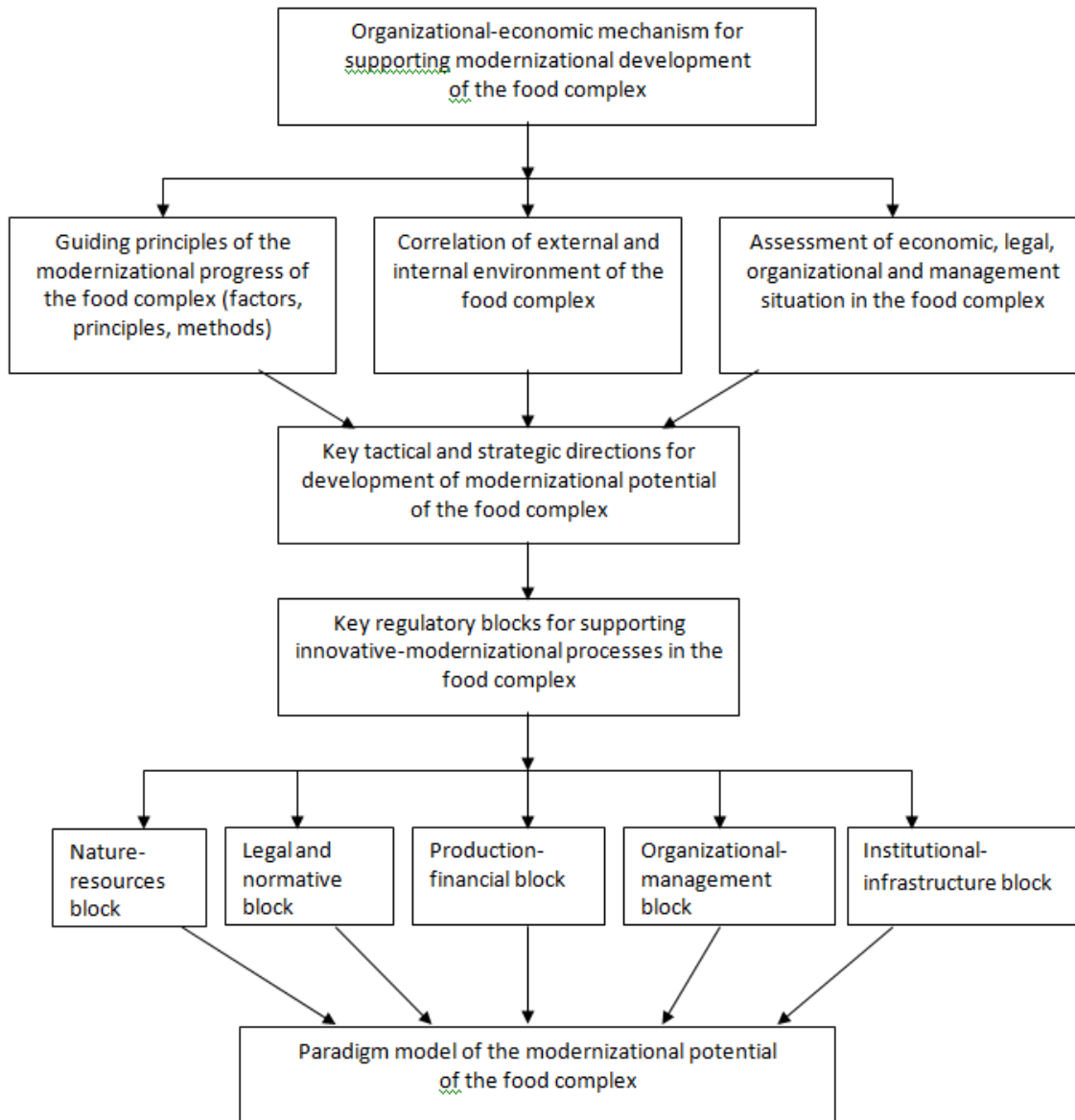


Chart 1. Generalized outline of the organizational-economic mechanism to support modernizational development of the food complex.

Core task of the food complex modernizational development remains the issue of resolving food security problems in the country which requires sustainable and steady growth in production output of quality food products, ensuring active functioning of regional food markets, adequate stockpiling of strategic types of food products, organization at food markets of effective marketing and price information systems, ensuring proper income for the population capable of purchasing staple food products, ensuring build-up and efficient utilization of the food complex modernizational potential, formation of necessary conditions to enter period of economic growth in all food complex components on the modernizational basis in order to establish adequate life and well-being conditions for the people.

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Received: 23.05.2017

Reviewed: 07.06.2017

Accepted to publishing: 23.06.2017

PECULIARITIES OF TAXATION OF PRODUCERS OF SUGAR BEET IN UKRAINE

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Abstract: *The article shows the dynamics of sales of sugar beet farms, determines the reasons of their production decline, in particular, high labor costs, primitive technology of this culture and prejudice of sugar processing enterprises to owners of private farms. A generalized private farms' sales structure of sugar beet is considered. It is determined the price difference for individual products and agricultural enterprises, which is explained the different approaches to VAT. Thus, the producers, that are legally subject to VAT, actually spending the same money on the production and sale of sugar beet, receive much more income because of the difference between "output" and "input" of VAT. The current system of taxation of private farms in the sale of agricultural products is analyzed. Effective measures of state regulation of production and sale of sugar beet households in terms of a price risk are proposed.*

Keywords: *private farms, processing plants, taxation, pricing, sugar beets, raw sugar, VAT, cost.*

JEL Classification: H21, H25

Introduction

In recent years sugar beet industry is in a serious condition, including sugar production in some years not even reached the level of domestic consumption. The main problems of development of sugar beet production in Ukraine are: lack of working capital, high cost of production of sugar beet and sugar, the lack of concessional lending, inefficient regulation of the sugar market, a significant decrease in acreage under sugar beet, the reduction of the logistics of sugar beet farms and sugar factories.

However, the search for effective models of taxation of private farms lies precisely in the sphere of commodity production, i.e. in the part of financial and economic activities associated with the turnover in the field of direct sales of sugar beet and the use of mediation schemes and economic relations with processing companies. Analysis of the problems of sugar beet processing under a tolling agreement requires consideration of the question concerning the taxation of income from this activity. It justifies urgency of development of scientific bases of tax system development in relation to the sugar beet industry, which would fully ensure implementation of the functions of taxes and contributed to the balanced development of sugar beet production in Ukraine.

Analysis of recent researches and publications. In the current reality, in our country the study of private households Y. Akchurina, I. Balanyuk, P. Berezivskiy, O. Bitter, O. Demyanchuk, T. Dudar, V. Zbarskiy, F. Zinoviev, A. Danilenko, O. Komlichenko, D. Krysanov, G. Kupalova, V. Lupchuk, L. Lipuch, M. Malik, V. Mesel-Veselyak, L. Mikhailova, O. Onishchenko, I. Prokopa, P. Sabluk, G. Cherevko, L. Shepotko, V. Shiyan, O. Shpuchak, V. Yurchishin and others paid attention to this problem. Their works are important and are the basis of modern economic views on the problems of development and functioning of personal peasant farms, including the cultivation and sale of sugar beet.

The aim of the article is to analyze the existing system of taxation of private farms engaged in cultivation of sugar beet, as well as justification of proposals for the ordering of the elements of pricing and taxation of individual farms and agricultural enterprises in case of barter transactions and product sales to processing enterprises.

Presenting main material. Recently, Ukraine has seen a dramatic decline in crop sugar beet. Following 2015, the area under sugar beet showed a record minimum - about 240 thousand ha and

prevented another overproduction of sugar. As a result, sugar beet growers increased profitability to 26.9% in 2015 vs. 18% in 2014. Selling price of sugar nearly doubled during 2015, grown up from 7.5 thousand. UAH to a record high of 14 thousand UAH [1]. It is important that Ukraine sugar beet production is gradually moving to larger farmers. Thus, a quarter of sowing crops in 2016 owned farms "Astarte" and "UPI-Agro" specializing in the production of sugar. Holdings have more opportunities to produce sugar and sugar beet with minimal cost, especially with park special machinery for sugar beet growing from seed drills for combines and implement energy-saving technologies in processing facilities.

Understandable that from 2005 there was a gradual decline in sales households sugar beet processing more than 6 times (fig. 1). According to a survey of holders of the private sector, 93,2% of them consider it inappropriate to grow sugar beets. The main reason is price discrimination for the detailed info on this product.

Reasons for the decline in sugar beet production in households are high costs of labor and primitive technology of cultivation of this culture, as well as a based attitude of the sugar processing enterprises to owners of private farms. For example, some sugar plants of the Ternopil and Khmelnytsky regions physical contamination sugar beet, dug and cleaned by hand, is 10-12%, when the level of sugar content of 13-14% (the basic sugar content is 16%).

Quality parameters grown in PF sugar beet were much higher than in the agricultural enterprises that are primarily concerned with physical contamination. The average physical contamination of sugar beet grown in the farms of the population, was equal to 3-4%, as private producers carries out all the process of harvesting sugar beets by hand [2].

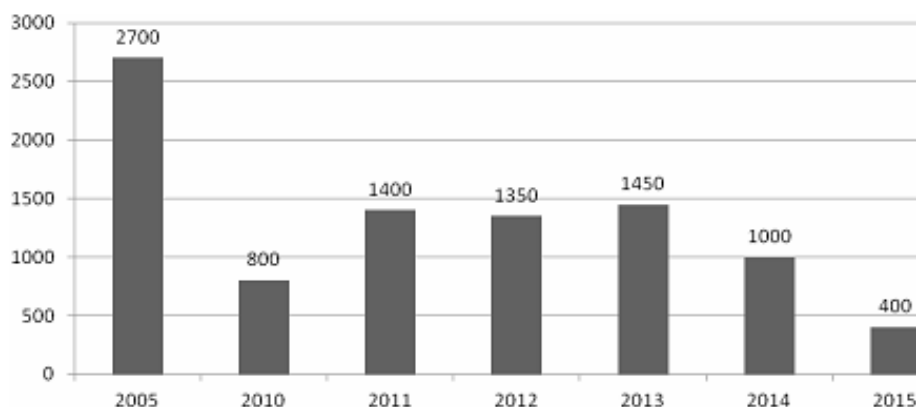


Fig. 1. The dynamics of the realization of sugar beet farms population, ths tons

Source : calculated by the authors.

Private farms of Ukraine the bulk of the grown sugar beet sell to sugar factories in terms of raw material and cash, through authorised persons (fig. 2).

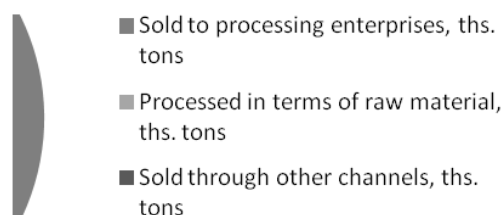


Fig. 2. Implementation structure of sugar beet farms of the population

Source : calculated by the authors.

It should be noted, the presence of significant volumes of sugar beet through trading-intermediary structures, which are in a special VAT. In our view it gives the ability to use schemes to minimize the tax the purchase of agricultural products from individuals, which leads to a significant understatement of receipts of funds in the budget.

With the aim of expanding the areas of sugar-beet due to PF sugar mills provided trade credit in the form of seeds at a price lower than the market, provide mineral fertilizers. In addition, the practice of export of raw materials transport processors, or producers to be reimbursed for transportation costs. However, since 2005 the sugar mills stopped the reimbursement of the expenditure for private households, because they were attributed to the cost of raw materials [3].

However, the main factor that influenced the decline in sugar beet cultivation in private farms, is the decline of commodity prices and different levels of cost of 1 ton of sugar beets for individual farms and agricultural enterprises. In 2015 the price of 1 ton of sugar beet of farms was at 20-22% below the prices of agricultural enterprises [4]. The difference in prices between products of the two entities is quite noticeable. She explained the different approaches regarding VAT.

The purchase of sugar beet and subsequent processing of the legal persons, according to the provisions of the Tax Code (TC) the above transaction for the sale of agricultural products do not have tax credit (input VAT), value added tax in accordance with the provision of the Tax code is charged at full cost and, ultimately, dramatically increasing the price of this product [5].

Specified negative impact on the whole system of workpiece processors creates additional difficulties, leads to a decrease of the workpieces. In this regard, most sugar factories carry out the processing of saharasia in terms of raw material, which gives the opportunity to avoid the so-called "double taxation" of the VAT.

Transfers of raw material to the contractor (processor) and return to the customer, as well as residues of raw materials and waste production are not considered transactions for the sale (realization) of goods, as ownership of raw materials from the customer to the processor does not enter (p. 14.1.202 Tax code - TC). Therefore, the results of the activities they are not affected. Tax consequences the parties will come after the execution of the work under the terms of the agreement, and the calculations for this work.

At the customer's cost is made the processor work is included in the cost of manufactured products in the established order. If products will be sold to third-party entities, the costs should reflect the date of recognition of income from sales in accordance with section 138.4 of the tax code.

Quite often, when as payment for work performed for the processing agreement provides for the transfer of the processor part of finished products, raw materials or waste products. This transfer is not only delivery, but also barter operation (o. 14.1.10 TC). In this case, the income of the customer (the cost of a processor) is calculated on the contract value, but not below (above) from the regular price of commodities and materials (CaM) (p. 153.10 TC). It should be remembered that according to the current rules if the operation does not fall under article 39 TC, normal price should be negotiated.

In such a situation, the customer increases revenue from operating activities the value passed as payment for goods and materials based on the contract price, but not below normal. Income is recognized in the period when the document on the transfer of goods and materials (certificate of completion or invoice).

The costs of the processor are determined by the contract (but not above normal) value of the received goods and materials. For the purposes of taxation expenses are recognized in the period the sale of goods or services, if the received goods and materials used in production and included in cost of the realized goods, works, services (item 138.4 of the tax code); the receipt of goods and materials if they are not included in the cost and are included in other expenses (item 138.5 TC).

Transfers of raw material to the processor and return to the customer, as well as residues of raw materials and waste production are not relevant to the operations of supplying goods (item. 14.1.191 TC), therefore they are not subject to VAT (item 185 of the TC). But this does not apply to the part of raw material and finished products, which goes in payment of the executed works on processing.

Operations for the execution of works on processing of customer-supplied raw materials are subject to VAT in a generally established order. At the processor, such operations are subject to VAT

at the rate of 20% in accordance with section 185.1 of the tax code. Because a taxable entity is an individual – the owner of a farm, the income of which is subject to taxation by the tax to incomes of physical persons. The Main requirement is the presentation of a certificate from local authorities of the presence of such a land plot (its size and purpose) [6].

Thus, effectively spending the same amount of money on the production and sale of sugar beet farms that are legally the taxpayers will receive much larger profit, because the profit of agricultural enterprises is higher compared to the profit of private households as the difference between "outgoing" and "incoming" VAT. Because of the imperfection of the procedure of payment of raw sugar private farms are forced to rely on shady schemes, that is, to implement the sweet roots are not in direct relations with the processing enterprises, and indirectly, through front legal entities with the purpose of at least partial increase of income in which the object of VAT taxation is the margin. It should be noted that sugar beet production in households due to the increasing complexity of socio-economic condition of domestic agriculture, has forced and is unpromising: through the excessively high cost of manual labor, simplified manufacturing technology, etc.

Given the possibility of long storage of sugar and stable demand is a product that can be a means of accumulating funds of the owner of PF, the purchasing power which is not reduced even under the influence of inflationary processes.

As evidenced by the results of the survey, 83% of owners of PF grown sugar beet with the purpose of further realization of sugar; 17% for their own consumption, 95% – sell sugar trade-intermediary structures, 5% independently on the market. If we consider the generalized structure of the sales of sugar by private producers, 23% sugar are implementing in the autumn, 12% in winter and 65% in the spring and summer months.

However, in further implementations can be some tax complications, as the owner of the personal farm of the seller and the buyer – a legal entity.

In particular, in this case, sugar is a product of industrial processing, which makes its owner – a physical person to take advantage of the law of Ukraine "On personal peasant farm" and the Tax code, the entitlement to benefits for the payment of income tax of physical persons [4; 7].

A legal person will have relevant complications in their dealings with defaulters of the VAT – the owner of a farm. Private producers and in this situation feels the pressure of tax legislation. It is not a VAT payer, so can't sell sugar for sold sugar beet is a major trading intermediary entities – VAT payers that adhere to the requirements of the current legislation [8]. Households are forced to sell sugar beets for below the minimum wage legislation, price trade-intermediary structures, which work on the simplified system of taxation. This circumstance leads to the formation of the shadow market of agricultural products, particularly sugar market [9]. The owners of private farms were forced to implement in 2015 to the entrepreneurs of sugar at a price that 12-15% below wholesale selling price of sugar mills, which led to a decrease in the efficiency of sugar production in personal peasant farms.

Obviously, the sugar-beet industry sustainable development can only be subject to basic principles of the price of the product, the level should be sufficient for cost recovery and obtaining at least minimum income. How to convince calculations, the wholesale price of sugar beet and sugar could not offset the rapid increase in the cost of production of these products (table 1).

This data suggests that the economic efficiency of sugar beet growing and processing in Ukraine has a colorful character that is associated with a number of objective and subjective reasons. Recent years have seen the growth of profitability of sugar beet, but it is a strengthening of unprofitable refineries mainly due to the sharp rise in energy prices.

However, the introduction of a mechanism of minimum prices for sugar beet contributed to increasing the economic attractiveness of sugar beet, but to a lesser extent this mechanism affected the sugar industry because of its high energy and material consumption.

Ukraine showed growth in profitability of sugar beet production in 2016, thanks to projected global sugar deficit in 2017 farmers actively sow this crop fields.

Another positive factor for manufacturers: Ukraine transitional sugar stocks dropped to a minimum. According to the data of "Economic discussion club" transition remains of sugar on the basis of 2015/16 marketing year are forecast at 288 thousand t.

Table 1. The effectiveness of the implementation of sugar beet and sugar and comparison prices of these products in Ukraine

Period	Sugar beet			Sugar		The ratio between the selling price beet and wholesale price of 1 ton of sugar
	price realization 1 t rubles	the cost of sugar beet, rubles / t	level profitability, %	wholesale the price of 1 ton, rub. (tsukro-factories)	level profitability %	
2000	121,5	114,8	5,8	1701,5	5,5	1:14,9
2001	139,1	137,0	1,5	1973	0,3	1:14,4
2002	125,4	137,3	-8,6	1897,0	-3,1	1:15,1
2003	139,3	131,2	6,2	1943,0	1,6	1:13,9
2004	135,7	136,8	-0,8	2008,4	3,4	1:14,8
2005	177	168,4	4,8	2354,8	5,1	1:13,3
2006	186	155,4	11,1	2664	2,4	1:14,3
2007	160,0	179,9	-11,1	2319,1	-2,5	1:14,5
2008	224,0	209,2	7,1	2451,7	-2,0	1:10,9
2009	418,1	305,2	37,0	3816	2,3	1:9,1
2010	487,3	417,6	16,7	5717,3	3,2	1:11,7
2011	519,2	380,4	36,5	6019,1	-3,0	1:11,6
2012	440,0	387,2	15,7	4643,7	-15,0	1:10,5
2013	397,8	387,7	2,7	4698,5	8,7	1:11,8
2014	494,2	406,0	17,8	6721,1	13,4	1:13,6
2015	788,6	575,8	26,9	9633	-4,5	1:12,2
2016	848,6	675,4	20,4	11105,1	-20,0*	1:13,!

Source: calculations according to the State Statistics Service of Ukraine.

** Projections.*

We believe that the shortage of sugar in Ukraine is hardly possible because insolvent consumers reduced consumption and increased farmers crops. But count on low prices is not worth it. Cabinet of Ministers of Ukraine has planned a price increase for 2016/17 marketing year, the minimum price for sugar beet increased by 40.7%. Simultaneously, under the deregulation of the Ministry of Agrarian Policy and Food of Ukraine has developed a draft law "On ceasing to be invalid some laws of Ukraine on state regulation of sugar production and sales", which proposed to abolish price controls on sugar beet and sugar by setting their minimum level and restrictions on the supply of sugar producers on the domestic market. Adds optimistic prospects for sugar exports to Asian markets [1].

This indicates that sugar producers do not lose. Producers are not implemented sugar at a low price in the domestic market in 2016 is likely to make a great success of it in 2017.

Due to the situation that the minimum price is not profitable for the production form, so that now there is a discussion about what "minimum price for sugar should be determined based on the wholesale price according to supply and demand in the market which operating on the domestic market, the average for the month of November of the marketing year[10–12].

We believe that in addition to this, the low impact of minimum prices for sugar beet and sugar to improve the efficiency of sugar beet production caused by the fact that it is necessary to change the approach to calculating regulatory costs. Thus, according to the Procedure the minimum price for sugar beets has been determined by the regulatory cost of production of 1 ton of sugar beets with appropriate productivity and minimal income and value added tax. However, regulatory costs are calculated as the average of the industry, which is identical to the economic nature of regulatory costs, and that, consequently, causes no reasonable definition of regulatory costs.

In order to this approach would be lost main purpose of the use of minimum prices, namely ensuring the economic attractiveness of the industry that will be the motivating factor for producers in terms of production of sugar beet and sugar. The provement of this is that the wholesale price in the

period November-February low, even below production cost. Thus producers in the absence of profit are not able to step up the production process and lead expanded reproduction. If you do not change the situation, the sugar beet industry can be lost completely, despite the fact that the global price much lower sugar prices in the domestic market and leverage domestic market protection is not used properly. To make the minimum price in the market triggered should provide penalties of 20% of the batch of sugar as the seller and the buyer, as well as complement, the mechanism of regulation of the sugar market trade intervention and strict control on import to Ukraine of raw cane sugar and other sugars.

It is known in local conditions, that one of the instruments of state regulation of the sugar-beet industry is to establish minimum prices for sugar beet and sugar. Thus, the Cabinet of Ministers approved a draft decree "On state regulation of sugar and sugar beet" in the new marketing year, which runs from September 1, 2017 to September 1, 2018, which provides setting of minimum price for white sugar in the amount of 9172.57 UAH per ton, and for sugar beets - 633.10 USD per ton (excluding VAT) [13].

So, it is assumed that refineries will be calculated by the sweet roots at a price not below 633.19 UAH / t including VAT and sugar to realize not below 9,17 thousand UAH / t. If the owner sells sugar at prices below the minimum price specified, it must pay a fine of double to the value of sugar.

Note that the minimum price for sugar beet is established for farms, including VAT, and for private households - excluding VAT. So arbitrarily created unequal conditions for beet seeds farms subject to VAT, and are not registered as such. Households for purchased inputs received and services required in the process of growing beet, almost equal pay beet farms with price including VAT. However, they have no documentary evidence of the amount of tax as part of the price of purchased goods (received services), which is a problem of accounting, rather than actual costs. The consequence of this situation is to reduce interest in the cultivation of sugar beet farms.

Author scientists agree that the production of sugar beet farms - is forced and hopeless phenomenon caused by complications of socio-economic situation in the agricultural sector. These conditions help prevent householdstoreduce production of raw materials for sugar factories, and they supplied for processing sugar beet better quality. It is obvious that the discriminatory economic conditions for sugar beet growers in households not justified and would lead to a significant reduction of sugar beet and potatoes, increasing imports and deepen the economic and social problems in rural areas.

Elimination of private farms growing sugar beet will lead to the decreasing in domestic sugar production, although the current time is not significant amounts to 2-3%, while in previous years the share private farms in the production of sugar beets exceeded 20% [11]. However, given the favorable external environment of the world sugar market and not the full use of processing capacity of sugar factories advisable to make full use of the possibilities of private farms producing sugar beets. Existing elements of pricing mechanisms and tax would be economically feasible, provided that the processors fully satisfy raw materials due to large specialized farms.

These problems of sugar beet private farms will be solved with the installation of a single value of minimum prices for sugar beet - regardless of the origin of agricultural commodity-raw deliverer of the VAT payers. However, the proposed measures may lead to a decrease in revenue, but is now considered appropriate. First "donation" of the budget of sugar beet farms are economically unfounded and biased, due to the imperfection of the accounting system, in particular the lack of fixing the "input" VAT. In this manner pay personal sugar beet farms have to sell their produce to sugar factories are not in direct channels and via intermediaries, in order to at least partially received increasing revenues. State must determine that it is cheaper, or lose all sugar and without income least 16 mln. UAH of budget revenues through tax revenues or decrease by only 3.5 mln. UAH for compensation to sugar factories pay an additional amount of sugar beet delivered personal peasant holdings to a level for agricultural enterprises – VAT [5](VAT amounts per 1 ton of sugar beets shown in fig. 3).

1. Manufacturer and shuffler of raw materials – agricultural enterprises – for VAT (In terms of return pre-existing mechanism of VAT). Since 2017, agricultural producers will pay VAT on general grounds (the rate of VAT on agricultural products – 20% and the minimum price applicable from 1 September 2017).

Sugar beet agricultural enterprise		Sugar plant		Retail trade
Minimum Price sugar beets VAT – 760.68 UAH / t excluding VAT – 633.19 UAH / t (VAT – 127.49 UAH / t)		The minimum price of sugar VAT – 11,007.08 UAH / t excluding VAT – 9172.57 UAH / t (VAT – 1835.23 UAH / t)		Selling price VAT – 15600 UAH / t without VAT – 12 528 UAH / t (VAT – 3072 UAH / t)
Number raw materials 1t	1 t	Number of received and realized 0.12 tonnes of sugar	0,12 t**	Number implemented sugar – 0.12 t
Proceeds from sales 1 tonne of beet – 760.68 UAH including: excluding VAT – 633.19 UAH VAT – 127.49 UAH	sugar beets	Proceeds from sales sugar – 1320.85 UAH including: excluding VAT – 1100.71 UAH VAT – 220.14 UAH	sugar	Proceeds from implementation – 1872 UAH including: excluded – 1497.6 UAH VAT – 374.4 UAH
left 14,49 UAH (127,49 – 113,00*)		listed 92,65 UAH (220,14 – 127,49)		listed 154,26 UAH (374,40 – 220,14)
National budget 246.91 UAH (92.65 + 154.26)				

* 113,00 USD – the VAT inlet for companies purchasing used in the composition of inputs per 1 ton of cash

2. The manufacturer and shuffler of raw materials - a private farm - non-VAT

Private peasant household		Sugar plant		Retail trade
Minimum Price sugar beets – 633.19 UAH / t (VAT – 0 UAH / t)		The minimum price of sugar VAT – 11,007.08 UAH / t without VAT – 9172.57 UAH / t (VAT – 1835.23 UAH / t)		Selling price VAT – 15600 UAH / t without VAT – 12 528 UAH / t (VAT – 3072 UAH / t)
Number raw materials 1t	1 t sugar beets	Number of received and realized 0.12 tonnes of sugar	0,12 t**	Number implemented sugar – 0.12 t
Proceeds from sales 1 tonne of beet – 633.19 UAH (VAT – UAH 0)		Proceeds from sales sugar – 284.4 UAH including: without VAT – 1100.71 UAH VAT – 220.14 UAH		Proceeds from implementation – 1872 UAH including: without VAT – 1497.6 UAH VAT – 374.4 UAH
left 0 UAH		listed 220,14 UAH (220,14 – 0)		Listed 154,26 UAH (374,40 – 220,14)
National budget 374.40 UAH (220.14 + 154.26)				

3. Offer. Manufacturer and shuffler of raw materials – private farm – non-VAT (equally in terms of the minimum price for sugar beet and operating procedure of VAT)

<i>Sugar beet household</i>		<i>Sugarplant</i>		<i>Retailtrade</i>
<i>Minimum Pricesugar beets – VAT - 760.68 UAH / t without VAT – 633.19 UAH/t (VAT –127.49 UAH / t)</i>	1 t sugar beets	<i>The minimum price of sugar VAT – 11,007.08 UAH / t without VAT – 9172.57 UAH/t (VAT – 1835.23 UAH / t)</i>	0,12 t** sugar	<i>Selling price VAT - 15600 UAH / t without VAT - 12 528 UAH/t (VAT - 3072 UAH / t)</i>
<i>Number raw materials 1t</i>		<i>Number of received and realized 0.12 tonnes of sugar</i>		<i>Number implemented sugar - 0.12 t</i>
<i>Proceeds from sales 1 t of beet – 760.68 UAH including: without VAT 633.19 (VAT –127.49 UAH)</i>		<i>Proceeds from sales sugar – 1320.85 UAH including: without VAT – 1100.71 UAH VAT – 220.14 UAH</i>		<i>Proceeds from implementation - 1872 UAH including: without VAT – 1497.6 UAH VAT – 374.4 UAH</i>
		Listed 92,65 UAH (220,14 – 127,49)		Listed 154,26 UAH (374,40 – 220,14)
National budget 374.40 UAH (127.49+92.65+154.26)				

Fig. 3. The order and the amount of calculation and payment of VAT to the state budget

** Output of sugar accepted 12%.
Source : calculated by the authors.

According to calculations carried out (Fig. 3), we considered various options for charging VAT mechanism in the implementation of sugar beet processing plants. Thus, the first option, in terms of return pre-existing VAT mechanism that involved the accumulation of his agricultural enterprise, the state budget will be transferred to UAH 246.91 per 1 ton of raw sugar that at 127.49 UAH / ton less than the 2017 operating conditions.

We believe that in the present circumstances, when Ukraine becomes sugar-beet industry attributes the growth would be appropriate to keep the preliminary operating mechanism of VAT that would stimulate farmers to the cultivation of sugar beet.

In case if the raw materials seller is non-VAT, the contributions to the state budget will amount to 374.40 UAH / t. Obviously, in order to motivate farms growing sugar beet should include a comprehensive system of incentives for their activities, including through the VAT refund.

Prices for sugar beets are crucial for sugar prices as the share of raw material costs in the cost of sugar in Ukraine is 65% in the retail price of sugar VAT – 40% (the cost of processing and profit sugar factories - 30% of the costs and benefits of trade – 10% VAT – 20%).

The price situation on the domestic sugar market heavily influences the world market, due primarily distinct of cyclical price fluctuations on the world sugar market, and this leads to unexpected and significant changes in the implementation of foreign trade operations. Also, consumer properties of the sugar suitable for speculation market transactions, as this product can be stored for a long time. Note that this makes it possible to form a transitional stocks of sugar, which affect the size and direction of price changes.

In recent years the world market sugar price reduction observed record: quintal sugar was sold at a price below 20 euros. It should be noted that after the Second World War, the world sugar market has been stabilized, and then could trace the precise series of conditions. They emerged that the continuous growth of the world consumption of sugar in the deficit situation was at a high price, which ultimately stimulate production. Later sugar became higher growth rate compared to consumption, which led to lower prices.

According to the results of the research, given the current state of sugar-beet industry in the implementation of pricing policies should not use some price controls, and a comprehensive system of

economic measures direct and indirect effects that would be based on the relevant legal norms and organizational procedures, public support producers and moderate protectionism that would create conditions for a balanced market. This is particularly important for the underdeveloped market infrastructure, unavailability of information about the market situation and the actions of other factors that cause difficulties in sales.

In a situation when the country is continuously declining gross production of sugar beet, and there is a need to import sugar even for their own needs, it is necessary to realize that private farms of the population provide more than a quarter of gross yield of root crops [14]. Despite this, existing elements of the state regulation of the sales of sugar beet under current conditions are unacceptable, especially deficiencies of the pricing system. Considering the problems of sugar beet private farms will be solved subject to the establishment of uniform minimum prices for sugar beet [15].

Conclusions. It is proved that the condition of the sugar-beet industry has changed significantly since the end of the twentieth century, so the current practice of taxation of producers of sugar beets requires some improvement, particularly on its gradual approach to common standards. Expedient is the introduction of a differentiated approach to the taxation of certain categories of producers of sugar beet and coordination of tax incentives with the state priorities of development of the sugar industry.

We emphasize that in the case of the establishment of common for all categories of farms the level of minimum prices for sugar beet processing plants will be forced under the current tax system to take on the additional costs associated with equal pay for the raw materials. We believe that it is necessary to change the principles of taxation of sugar in his realization of sugar mills is to introduce a reduction in the amount of VAT on sugar to raise prices of sugar beet for deliverers – private farms.

So, in domestic practice the minimum price for sugar beet has been established for farms, including VAT, and for private households - excluding VAT formation of sugar beet unequal conditions for enterprises that are subject to VAT, and are not registered in such way. For purchased inputs and services required for growing beet farms almost equal pay sugar beet farms with price including VAT. However, they have no documentary evidence of the amount of tax as a part of the price of purchased goods (received services), which is a problem of accounting, rather than actual costs. The consequence of this situation is to reduce interest in the cultivation of sugar beet farms. The proposed measures may lead to a decrease in revenue, but in the present circumstances are appropriate.

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Received: 26.05.2017

Reviewed: 14.06.2017

Accepted to publishing: 23.06.2017

ECONOMIC SECURITY OF ENTERPRISE AND THE INNOVATIVE COMPONENT

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Abstract: *This article reveals the importance of the economic security of enterprise and its innovative component. Innovations represent the main tool in improving production efficiency and product quality, reducing costs, increasing competitiveness and thereby ensuring the economic security of the enterprise. The purpose of the article is to present main directions of improving innovative activity of enterprises. The contribution of this paper consists of reviewing the innovation system on the example of the Republic of Moldova and helping the management by presenting measures of increasing technological and innovative component of economic security of enterprise.*

Keywords: *development; economic security; innovations; state support.*

JEL Classification: M10, O10, O30

Introduction

In conditions of competitive environment and economic instability, entrepreneurs assume almost all business risks. In this regard, the issues of ensuring economic security of enterprises become greatly important. Nowadays, the ensuring of economic security of enterprise is directly determined by the development and introduction of innovations in its activity. Innovation through the activities of research and development is deemed as crucial driver of economic growth. The management must ensure the innovative component of economic security of enterprise. At the same time, state must create conditions for innovative development. The contribution of this paper consists of overviewing the innovation system on the example of Republic of Moldova and helping the management by presenting measures of increasing technological and innovative component of economic security of enterprise.

The purpose of the article is to present main directions of improving innovative activity of enterprises.

Economic security of enterprise and innovations

Sustainability and economic security are the main sources of the company's development opportunities (Raudeliuniene *et al.*, 2014, pp. 71–79). There are several types of security by content, depending on the areas of public life and the direction of human activities: political, economic, information, ecological, military and others. Economic security holds a special place among the various types of security. This is because not all types of security anyway can be sufficiently realized without economic aspect.

E. Oleynikov (1997, p. 38) defines economic security as a state of the most effective use of resources to overcome threats and ensure stable operation of the enterprise now and in the future. Economic security of enterprise includes three important elements: economic independence, sustainability and development (Ianioglo & Polajeva, 2016, p. 5). It is an important factor of ensuring its sustainable development.

The main areas of economic security of enterprise: financial, personnel (human resources), production, technological and innovative components are four distinguished functional components. This structure is offered for an effective analysis of economic security.

1. The financial component of economic security of enterprise implies the condition of the most efficient use of corporate resources, which reflects in the best values of business profitability, its capital structure, financial stability, solvency and liquidity of its working capital, in quality management, etc.

2. Production component involves the efficient management of the production process. Sales volume, profitability indicators and others determine this component.

3. Personnel component. An employee can destroy native organization or vice versa to achieve its prosperity. Even at the beginning of the 20th century, G. Ford (2003, p. 89) said that if he had taken away all his automobile factories, but leave the people he would be able to restore his car empire. However, if, on the contrary, he will have only factories without people, he cannot do anything. Consequently, the personnel of the company is its most important resource, and at the same time is a potential source of major losses and even bankruptcy of an economic entity.

4. The essence of the technological component consist in how the level of technology used in the company meets the requirements of the present, level of their competitiveness. The object of technological component can be equipment, expertise, as well as the knowledge, skills and experience of the staff. Innovative component is closely connected with technological, as well as technological progress is 'the result of the innovation process' (Rosca, 2004, p. 174). In current economic conditions, innovative nature of technological development represents a decisive factor in improving the competitiveness of enterprises, and the economy as a whole.

Innovations are important component of enterprise economic security. They represent the main tool in improving production efficiency and product quality, reducing costs, increasing competitiveness and thereby ensuring the economic security of the enterprise. The innovation process can be defined as a totality of consecutive actions for setting and implementing new technologies or the improvement of already existing ones.

The performance of innovation in enterprise depends on the efficiency level of main departments, including research and development department, marketing, finance and human resources department. Both economic theory and empirical evidence support the idea that innovation plays a vital role in increasing productivity on a sustainable basis. Therefore the management of the enterprise must ensure the innovative component of economic security, but also conditions for innovative development of the country should be created.

Favorable conditions and obstacles for innovative development in the Republic of Moldova

It is necessary to analyze the situation that prevailed in the country. Nowadays, in Republic of Moldova innovation has become trendy word. It is widely used in scientific and economic circles and in the mass media.

For the analysis of innovative activity of SMEs, turn to 'Global Innovation Index' (GII), which evaluates the effectiveness of innovation activities of 143 countries and economies around the world based on 81 indicators. According to the Global Innovation Index (2015), the Republic of Moldova ranked 43 (out of 143 countries included in the analysis), behind former socialist countries Estonia (24), Czech Republic (26), Slovenia (28), Latvia (34) and others.

An analysis of business innovativeness reveals that among the EU Member States, the highest R&D intensities in 2014 were recorded in Finland (3.17 %), Sweden (3.16 %) and Denmark (3.05 %). According to Organization for Economic Cooperation and Development, gross domestic spending on R&D in per cent of GDP in European Union was 1.94 per cent, and in Republic of Moldova only 0.35 per cent (figure 1), that shows insufficient state support. Therefore, major factors, which are, still, constraining innovative activity of Republic of Moldova are shortage of financial resources and insufficient level of the state support.

Innovations are primarily to enhance the competitiveness of enterprises in the real sector of the economy, as well as the entire national economy. Secondly - to increase the success of the companies in the business. It should be noted, that now in Republic of Moldova there are both favorable conditions and obstacles to innovation development of economy.

Favorable conditions for innovative development are: the availability of scientific capacity (human and intellectual capital) and of a relatively developed scientific and technological base, which is represented by research organizations; the geographical proximity to the EU and a large market; widespread access to the Internet, the population of Republic of Moldova actively perceives technological innovations; the presence of foreign banking institutions in the domestic capital market; and others.

Basic problems of science and innovation in the country are insufficient funding; obsolete material and technical base; low rates of technology transfer, a large outflow abroad of achievements

of the Moldovan science, the weak involvement of young professionals in the research process; insufficient integration into the international and European Research Area; ineffective encourage of partnerships with small and medium-sized enterprises and the manufacturing sector.

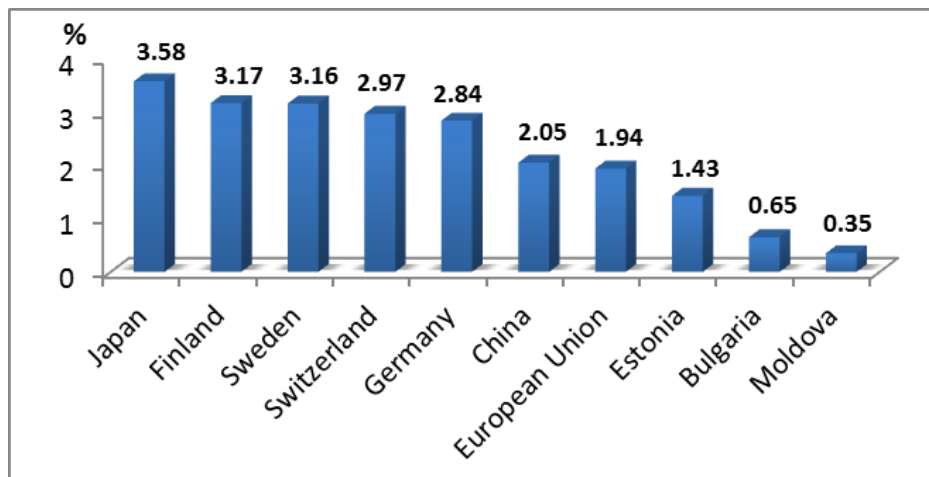


Figure 1. Gross domestic spending on R&D, percentage of GDP, 2014

Source: *Research and development (2014)*

Phases of ensuring economic security of enterprises

Unfortunately not all entrepreneurs are aware of the importance of establishing a reliable system of economic security of enterprise and determination of the main directions of its implementation. The instability and obstacles under which businesses operate requires from them a constant adaptation, adoption and improvement of measures of ensuring the economic security to achieve economic and social goals of the business, its innovative development.

The system of ensuring economic security (SEES) of the enterprise represents a set of organs, tools, methods, and events, aimed at protecting the business from the actual and / or potential external and internal threats that could lead to economic losses.

The purpose of this system is to ensure the efficient operation and sustainable development of the enterprise based on implemented set of measures. Authors identify four phases (Figure 2).

The first phase of ensuring the economic security system at an enterprise is planning. Planning involves not only the ability to take all the necessary actions, but also to anticipate any surprises that may arise, and be able to deal with them. Enterprises cannot eliminate all threats and risks in their activities, but they can prevent and counteract them through the planning system.

The second phase is to monitor the external environment and internal conditions of the company. In the process of monitoring, the principle of continuity of the observation of enterprise state with considering the actual state and tendencies of its potential development, as well as the development of the economy, the political situation, and other factors.

The third phase includes the identification and implementation of measures to respond to threats. The economic security of business entities is provided by the implementation of two approaches: based on preventive measures and an approach that responds to threats. Depending on the existing state of the financial and economic activity of the enterprise, and on the external and internal factors, the ensuring of economic security of the enterprise is carried out by its main functional components: financial, personnel (human resources), production, technological and innovative components. These measures can be both proactive and reactive, depending on the specific situation.

The fourth phase represents the control and improvement of the system of economic security. The economic security is not a static phenomenon and should be provided, maintained and improved on a regular basis. The main results of ensuring economic security of the enterprise should be achieving its economic performance and staff security that will allow enterprise to ensure sustainable development and achieve business goals.

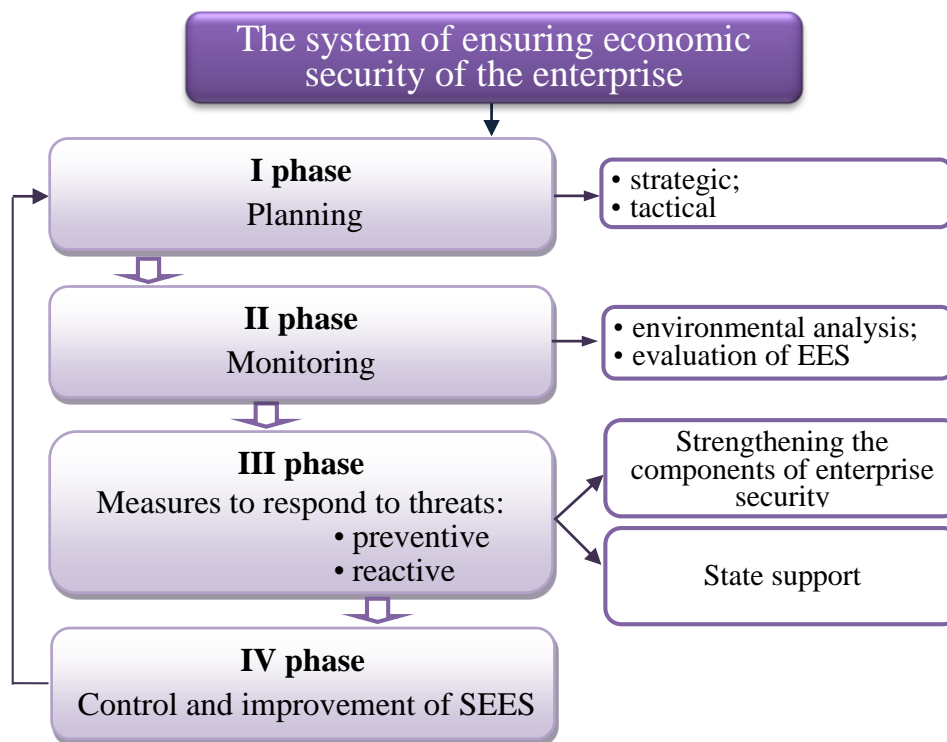


Figure 2. Phases of ensuring the economic security of the enterprise.

Source: compiled by authors

Main directions of improving innovative activity of enterprises

The ensuring of economic security of the enterprise is carried out by its main functional components: financial, personnel (human resources), production, technological and innovative components. One of the major threats to economic security of enterprise is a low level of innovation activity. This is due to the use of obsolete technologies, imperfect methods and forms of production organization and management, ineffective scheme of interaction of scientific institutions with innovative structures and others. All this leads to higher costs and lower competitiveness. Therefore, it is necessary the formation of the economic mechanism to increase innovative activity of enterprises in real sector of economy, which includes following main directions:

- Strategic innovation management represents the prediction of changes in the economic situation and focuses on achieving future results directly through the creation and development of innovations;
- Innovation planning includes a set of tools, information and processes to achieve the goals.
- The system of financing innovative processes include multi-channel sources of financial resources, the principles of investing accumulated funds, a mechanism for monitoring the use of investments, evaluation of the effectiveness of innovative projects;
- The taxation of enterprises that create and use innovations. Here, the state has considerable role, for example providing tax benefits to enterprises that modernize their production, and reduction of customs duties on equipment purchased abroad, in order to renew fixed assets.
- Strategic and tactical innovative marketing, aimed at maintaining the company's competitiveness and entering new markets. Innovative marketing considers market research, management of the production and sale of innovative products.
- Pricing of innovative products and services, which should be in accordance with a specific marketing strategy. Pricing depends on many factors (type of market, business strategy, supply and demand, the level of income of the buyer and others).
- State support and stimulation of innovation activity. State support should be focused on funding innovative programs, research and production farms (Lomovtseva & Trofimova, 2014, pp. 402-403).

Today, in the development of the economy of the leading countries still play an important role nano, bio and IT-technologies. Therefore, Moldova needs also to take one of the innovative niches. There exist conditions for this: necessary capabilities, a unique scientific school, which allows carrying out both basic and applied research.

Even the successful start of operation of young Moldovan innovative companies does not guarantee further development: big businesses do not need them, but they cannot afford to survive on their own. Young innovators facing bureaucratic obstacles in the ministries sell abroad ideas and technology themselves or leave the country. Transition to an innovative model of economic development is possible only when small and medium-sized industrial enterprises of the republic will use their own development. The republic must inherit experience of developed countries (Japan, China, Singapore, Finland and others), which had favorable innovation climate in the country and carried out their innovative leaps by creating the conditions to inventors so that they do not migrate.

Measures in order to increase technological and innovative component of economic security of enterprise involve:

- monitoring of the market development of high technologies and competitors' actions;
- planning of technological development of the enterprise;
- ensuring the competitiveness of technologies used at the enterprise;
- the sale or utilization of technologically and physically obsolete equipment;
- the modernization of the technical equipment of the enterprise;
- introduction of new innovative technologies in the production process;
- the use of competitive advantages to attract investments;
- increase the qualification of managers and specialists involved in the innovation activity;
- promoting the inventive and innovative activities of employees and others.

Conclusions

Innovations are important component of enterprise economic security. The management must ensure the innovative component of economic security of enterprise. In addition, conditions for innovative development at the state level must be created. Main directions of increasing innovative activity of enterprise were determined: strategic innovation management, innovation planning, financing innovative processes, taxation, innovative marketing, pricing of innovative products and services, state support and stimulation of innovation activity.

Depending on the existing condition of the financial and economic activity of the enterprise, and on the external and internal factors, the ensuring of economic security of the enterprise is carried out by its main functional components. Several measures were determined to increase technological and innovative components of economic security of enterprise. They include: the sale or utilization of technologically and physically obsolete equipment; the modernization of the technical equipment of the enterprise; introduction of new innovative technologies in the production process; increasing the qualification of managers and specialists involved in the innovation activity; promoting the inventive and innovative activities of employees; etc.

Innovations represent the main tool in improving production efficiency and product quality, reducing costs, and increasing competitiveness. They are an important factor of success and well-being of economic entities and the whole economy.

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Received: 25.05.2017

Reviewed: 10.06.2017

Accepted to publishing: 23.06.2017

SYSTEMATIZATION OF ASSESSING METHODS FOR THE DAIRY PRODUCTS COMPETITIVENESS

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Abstract: *The assessing methods of the appropriate level maintenance of products' competitiveness are studied and systematized, and one of the defining efficiency characteristics of the enterprise economic activity. As the analysis result of these approaches, the methods' advantages and disadvantages are formed and the using necessity of the most optimal technique is proved.*

Keywords: *competitiveness, competitive advantages, competitive environment, methods, enterprise, products*

JEL Classification: M11, O 14, O30

Introduction

Under the economic space globalization conditions, the products' competitiveness is becoming increasingly important. To achieve leadership positions in the market, it is important to choose the optimal method for assessing the products' competitiveness, to conduct research and analysis of the internal and external environment and to respond quickly to changes in the market situation.

Review of recent publications.

The theoretical and methodological aspects of assessing the products' competitiveness are reflected in the scientific works of many domestic and foreign economists, such as I. Ansoff [1], M. Porter [6], F. Fatkhutdinov [7], P. Berezovskyi, A. Dragan, M. Kalinchyk, M. Malik [3], M. Misiuk [4], T. Mostenska, L. Pavlovska [5], V. Topikha, N. Toshyna and others. Variability of the market environment requires further improvement of scientific approaches to assessing product competitiveness

The purpose of the article is to study and systematize methods for assessing the competitiveness of dairy products.

Research results. Existing methods and techniques for assessing competitiveness are based on determining their own capabilities and market activity. In particular, it is noted that resources effective usage is the main condition for the enterprise competitiveness, their dynamics affect both the level of quality and results from implementation and the need to attract external sources of financing [6].

Increasing the level of products' competitiveness simultaneously with the growth in sales and market share allows the company to create an image that, in turn, affects both the products' competitiveness and the competitive position of the producer.

The simplest of the methods is the evaluation (comparison) of the dairy products characteristics with similar products - the market leader. To assess the competitiveness, it is advisable to compare the parameters of our product with the corresponding competitor's product by their ability to satisfy one or another customer need. At the same time, in our opinion, it is expedient to take into account the relative nature of this indicator, to a large extent it is possible to use due to already existing approaches, based on calculations of single and group indicators of product competitiveness.

Single indicators reflect the level percentage of any technical or economic parameter to the value of the product- competitor same parameter:

$$q = \frac{P}{P_{100}} \quad (1.1)$$

Where q is the unit parametric index; P - is the product parameter value, which is investigated; P_{100} - is the product parameter value which is taken as a sample (which satisfies the demand by 100%).

The group indicator (G) combines the single indicators (q_i) of a homogeneous group of parameters (technical, economic, esthetic) using weighting factors (a_i) determined by expertly method

$$G = \sum_{i=1}^n a_i q_i, \quad (1.2)$$

Where n is the parameters' number, that are considered. In this case it is advisable to apply the following mechanism of competitiveness analysis (Fig. 1).

In some cases it is necessary to use the integral indicator of competitiveness (J), that is the ratio of the group indicator by technical parameters (G_T) to the group indicator by economic parameters (G_e):

$$J = G_T : G_e. \quad (1.3)$$

However, the group indicators usage, as well as the ratio of technical and economic indicators, is very limited, due to the constant change in weight coefficients data as a result of shifts in consumer preferences, which are often cognitive and can not be mathematically formalized. Or, the spent time on their formalization is large enough that it does not allow to react quickly to such shifts, and thus to ensure the objectivity of the analysis.

Therefore, in our opinion, it is expedient to implement this formalization in the function form, which has interchangeable technological and economic parameters. This function should be formed on the results' basis of simulation modeling of the production and dairy products' sale, since simulation modeling makes it possible to most fully take into account the factors of organizational and economic characters, raising it into a system of equations and inequalities.

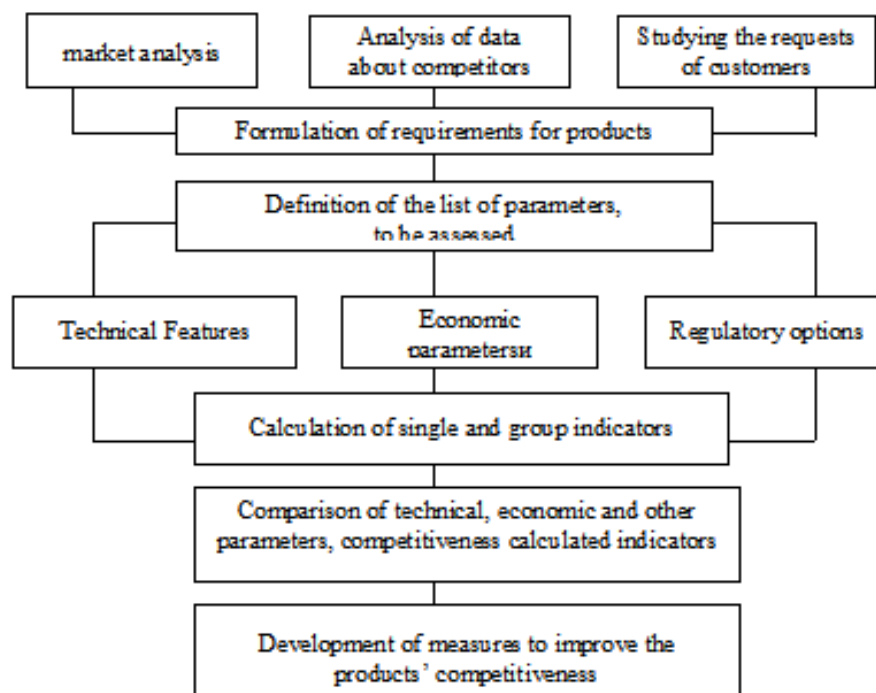


Figure. 1. Flow chart for analyzing product competitiveness

Source: developed by the author.

The methods' essence that mathematically formalize competitiveness is that the initial matrix of dimensionless indicators characterizing the activity of milk processing enterprises, taking into account the complex significance of the factors and conditions that they describe, turns into an effective matrix, shows the competitiveness level of each enterprise [5]. Complex significance is based on determining the internal and external significance of each of the factors describing the

characteristics of the objects' characteristics of the competitive environment (the enterprises under study).

The complex significance of indicator is based on determining the internal and external significance of each of the factors that describe the characteristics of the competitive environment objects (the enterprises under study). The dimensionless indicators matrix of characteristics allows you to compare indicators with each other.

The external significance of factors describing the products' characteristics reflect the importance of determining indicators from the point of view of the consumer and is calculated using the paired comparisons method. At the same time, in our opinion, the main drawback of this method is that it is objectively impossible to determine the factors' significance for each enterprise, since they are situational in character and are mutually-significant, which makes it practically impossible to apply statistical methods of correlation-regression analysis for their processing.

In some scientific works taxonomic coefficients of market activity and own capabilities of enterprises were determined, and generalizing indicators of product competitiveness were calculated using the complex assessment method of competitive environment objects, which allowed to analyze the mutual influence degree of each of the characteristics on others.

The usage of this approach to create a database for diagnosing the competitiveness of products ensures the consistency of the compared indicators, the sensitivity definition to changes that occur, and predetermines the possibility of a dynamic analysis of generalizing indicators ($\Pi_{xap_{kz}}$)

$$\dot{I}_{\partial\partial\dot{q}_{kz}} = \frac{\ddot{I}_{\partial k_z}}{\ddot{I}_{\dot{a}_{kz}}}, \quad (1.4)$$

Where: - $\Pi_{\phi_{kz}}$, $\Pi_{\dot{o}_{kz}}$ - the actual and basic generalizing indicators, k respectively, of the product characteristics in the - z analysis period [1].

A widely used method in recent years has been the assessing competitiveness method based on benchmarking, which is the performance analysis of the enterprise relative to the best enterprises in this industry or the economy sphere. In particular, among the factors that are used to assess competitiveness, allocate financial results (market share, sales and sales growth, profit margins, etc.), as well as the company's strategy related to financial indicators, that is, determine the strategies most successful in achieving the desired financial performance.

The following indicators are used: market share; the price segment in which the enterprise operates; share of the production cost in sales revenue; product sales profitability; labor productivity; capital productivity; the manager competitiveness; land use efficiency [1].

When determining and choosing a methodology for assessing the products' competitiveness, we agree with the opinion that in the conditions of the market and competition each producer tries to obtain a rate of return on the advanced capital not lower than the average. Otherwise, when the return on the invested resources is low, the enterprise loses its competitiveness, its bankruptcy is not ruled out. Again, a comparison is used with the average level of the rate return on advanced capital, which makes it possible to use relative values in calculating competitiveness indicators.

Comparative competitive analysis, discriminant and cluster analysis, SWOT analysis, models, BCG, GE/McKinsey, Shell/DPM, ADL/LC etc. are used to determine the marketing strategy of the milk processing enterprise [1, 3, 5, 6, 7].

Possible for application is the following assessment of the dairy products competitiveness, which is based not on the parameters' evaluation that in one way or another belong to the enterprise, but on consumer appraisal of the goods. In this case, the accompanying methodology is the method of sociological research and, in particular, the questionnaire. Since it is fairly believed that the buyer is primarily interested in the effectiveness of consumption (E_n), understood as the ratio of the useful effect (G) to the total cost of goods' purchasing ($I_{\text{снож}}$), the competitiveness condition of the goods from the point of view of the consumer takes the form:

$$E_n = G / U_{\text{consum}} \rightarrow \max \quad (1.5)$$

Considering that the useful effect (G) is formed under the influence of the factors shown in Fig. 1.3, then we can write this expression in the form of the following function of the enterprise activity, which the consumer tries to maximize:

$$F(x_1, x_2, x_3 \dots x_n) \quad \max \quad (1.6)$$

Thus, on the generalization basis of the above-mentioned algorithms and the competitiveness essence, the dairy products' competitiveness is determined by the comparative growth of consumption volumes of this product and is reduced to the ratio consumer's maximization of product competitiveness and price factors. According to function 1.6, the mathematical dependence, reflecting the competitiveness of production in time, can be written in the form of a function:

$$f(t_i, p_i) = a_i \frac{t_i}{p_i}, \quad (1.7)$$

Where t_i and p_i are, respectively, variables that take into account the technological ability to produce products of a certain quality and the price of that product;

a_i - a constant, taking into account the features of the organizational process of production and marketing of products.

When forming conclusions and developing proposals to ensure the dairy products competitiveness, in our opinion, it is necessary to apply an assessment of the product competitiveness at the consumption price, calculated in a manner similar to the assessment of quality parameters and displayed using the competitiveness index of the commodity at the price of consumption ($I_{U_{\text{consum}}}$):

$$I_{U_{\text{consum}}} = \frac{\sum B_i}{\sum B_i^e} \quad (1.8)$$

Where - $\sum B_i^e$ the amount of consumer costs associated with the acquisition and use of the competitor's goods (reference goods, analogues).

Given the goods' range that are produced, a comprehensive indicator of the competitiveness of enterprise products) ($K\Pi_T$) can be calculated as

$$K\Pi_T = \sum_{k=1}^n I_{Kk} * g_k, \quad (1.9)$$

Where - $k = 1..n$ - the number of goods in the products manufacture nomenclature;

g_k - The share of the name in the products manufacture nomenclature.

According to the analysis's results, one of these methods makes the conclusion about the competitive products in this market in comparison with analogues. And according to the evaluation results, they are developing measures to improve the products' competitiveness of the market. In addition, the number of studies should be carried out, which together create a methodology (Fig. 2).

Thus, as the analysis's result of existing methods for studying the enterprise competitiveness, it should be noted that its assessment have to be carried out on the basis of a comprehensive system analysis using methods, techniques and methods that allow for the phenomenon relative nature of product competitiveness.

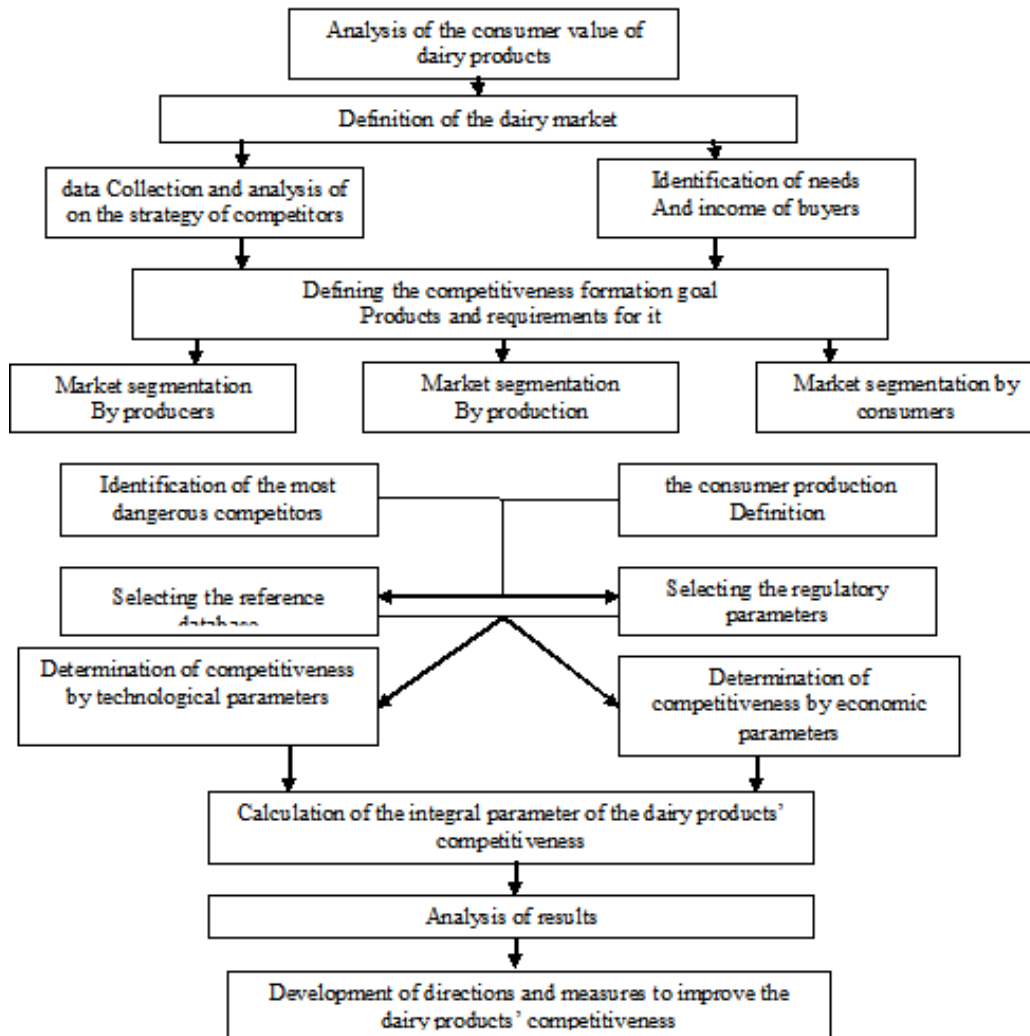


Figure. 2. Methodology for assessing the products' competitiveness of Milk processing enterprises

Source: developed by the author.

Conclusions

The problem of applying traditional approaches to the competitiveness formation is the production technologies sustainability for most types of products, so it is rather difficult to single out your own segment based on the goals of raising and forming requirements for products.

At the same time, the study key elements are the target vector of such an assessment, on the basis of which the hypothesis and the indicators' system are formed, this vector characterizes most fully. The final stage is the techniques' selection that use this system of indicators and apply or refute the developed a hypothesis. This methodological approach is due to the fact that none of the existing methods are able to give a full and complete description of the products' competitiveness in terms of qualitative, institutional, consumer factors and prices exercising the predominant influence on it.

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Received: 31.05.2017

Reviewed: 14.06.2017

Accepted to publishing: 23.06.2017

DEPRECIATION AS DRIVING FACTORS OF INVESTMENT IN AGRICULTURAL ENTERPRISES

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Abstract: *It is grounded that in domestic practice of management depreciation today is one of own sources of financing of reproduction of fixed assets, and the profitability of productive activities and reducing the possibilities of financing through lending as their main source of investment, therefore, study the issues of depreciation and the depreciation policy is the key to growth of investment activity of economic entities. It is underlined that in practical activities of agricultural enterprises, the formation of own sources of financing of the investment through depreciation charges is insufficiently expressed. It is formulated for agricultural enterprises it is expedient to create a Fund to Finance investment, which should consist of depreciation intended for the recovery and renewal of fixed assets. The mechanism of formation of the Fund will form a sufficient volume of own investment resources, which will take place the necessary volume of own investing resources, of the Fund provides the ability to generate a sufficient volume of own investment resources, due to the value depreciation that is on Deposit account, and the segment profit before tax, which is equal to the sum of the indexed depreciation. The proposals for creation of sinking Fund by reserving site restoration costs of fixed assets after the expiration of the period of use of assets. The proposed method of formation of the amortization Fund will allow companies to keep sinking resources into reproduction of fixed capital in their terms of value, which will contribute to the maintenance of expanded reproduction of production through technological upgrading.*

Keywords: *depreciation, investment funds, sinking Fund, investments.*

JEL Classification: *G10, G11, M20, O16, O42*

Introduction

Effective investment activities in any sector, including agriculture, defined the rational use of investment resources. Formation of investment resources is an important part of the investment and the overall financial strategy of industrial structures and the primary condition for the implementation of the investment process in all its stages. An obligatory condition for the functioning of any business entity is the creation and playback of investment flows that provide growth of agricultural enterprises. But now because of the lack of a clear regulatory framework is not given much attention assessing depreciation – a play based on the production capacity of entities in agribusiness. It should be noted that from a macroeconomic perspective depreciation is the return of the expenses in the production process by financing the restoration of labor. In the context of micro depreciation represent the financial result of the transfer of fixed assets and intangible assets of enterprises and organizations the cost of production, resulting in emerging source of their financial resources.

Analysis of recent research and publications

The study of the problems associated with the assessment of the role of depreciation as a source of investment resources, in the scientific literature devoted quite a considerable amount of work. Thus, in particular, L. Gorodnyanska explores areas of reproduction of resources at the enterprise level [1], B. Pshick explores ways to improve the depreciation policy and its role in the development of financial-credit relations of the state [2]. Scientific works of Y. Pivnyak [3] A. Jeremiya [4] aims to study the main concepts of depreciation and its role functions in a business enterprise. The effectiveness of methods of depreciation and the choice of the appropriate method of assessment for the enterprise researched the V. Lesniak [5] and M. Kotova [6]. Practical aspects of

obtaining information on the resource base of capital investments, including the accumulation of information on the use of depreciation amounts substantiated in his writings V. Len [7]. However, most scientific works were not accorded much attention to features of formation and use of depreciation in the agricultural enterprises in modern conditions of managing.

The aim of the article. The article is to examine the features of depreciation in the formation of investment resources and develop practical recommendations for improving the investment support of agricultural enterprises.

Presenting main material. In the process of productive activity, the basic agricultural funds, while retaining the original material form, gradually wear out. To replace worn-out fixed assets, enterprises must accumulate the necessary funds, that is, the amount of depreciation of fixed assets must be constantly recovered from revenue. This is achieved by charging depreciation included in the cost of production.

It is known that depreciation a process of gradual transfer of fixed assets and intangible assets based on their acquisition cost, production improvement according to the depreciation rates established by legislation.

In Ukraine, the depreciation is governed by Regulation (standard) of accounting № 7 "Fixed assets" [8] for accounting purposes and the Tax code of Ukraine [9] – for tax purposes.

In our opinion, depreciation under the current conditions of economic management should perform the following functions:

- reimbursement of funds invested in the means of labor (one of the purposes of depreciation is the return of capital invested in the means of labor through the transfer of their value to the value of the finished product);
- reproductive function (ensuring the re-creation of physical and moral wear and tear on the means of labor by accumulating the necessary amount of money in the depreciation fund);
- cumulative function (ensuring the accumulation of depreciation deductions in the depreciation fund);
- accounting function (depreciation is a means of systematic reflection in the accounts of the process of transferring the cost of labor to finished products produced with their use);
- fiscal function (depreciation creates opportunities for the enterprise to regulate the level of paid taxes, and for the state - creates opportunities for the implementation of tax policy).

The allocated functions reflect, as much as possible, the essence of depreciation in the market conditions of business management of enterprises. However, we believe that it is advisable to delimit these functions at the macro and micro level.

It should be noted that the fiscal function of depreciation creates at the macro level opportunities for the state to regulate the level of taxable profits and revenues from this profit to the budget. At the micro level, the fiscal function of depreciation is manifested in the ability for enterprises through the use of accelerated depreciation in the short term to receive tax benefits.

The accumulation function of depreciation at the macro level has a manifestation in the concentration of fixed capital in the sphere of material and non-material production in the accumulation of significant volumes of productive potential. And at the micro level – the accumulation of depreciation charges in the depreciation fund of the enterprise, and in case of transfer of depreciation to the sphere of circulation – the creation of value added.

So, depreciation, which has a manifestation in a complex of interrelated functions, is a complex economic category, a tool for regulating the activities of enterprises both at the micro- and macrolevels, and also as the central element of depreciation policy.

Note that since depreciation is an instrument of state regulation of the economy, it is additionally possible to distinguish such functions:

- stimulating function (accrual of depreciation, formation and use of an amortization fund should stimulate enterprises to reproduce worn out and renew existing means of labor);
- regulatory function (establishment and use of legally fixed norms and standards for the implementation of depreciation settlements, the procedure for the formation and use of an amortization fund) [10].

It should be noted that depreciation charges are one of the most important sources of financing the reproduction of fixed assets, which makes it possible to improve their composition and structure, and to increase the competitiveness of their products. This source of financing is not taxed and reduces the taxable profit of enterprises, no additional costs are required related to the mobilization of these funds. The amount of depreciation depends on the depreciation rates and the book value of fixed assets.

In practice, enterprises apply various methods for calculating depreciation charges that are legally consistent with the state's depreciation policy. Methods of depreciation allow you to regulate investment processes, reduce the tax burden on the enterprise.

In accounting, depreciation may be charged in one of the methods specified in clause 26 P (s) BU № 7 "Fixed assets" [8]:

- straightforward;
- reduce the residual value;
- accelerated reduction of residual value;
- cumulative;
- production.

Straight-line method (the method of straight-line write-off), followed by annual depreciation is calculated by dividing the value that is depreciated by the expected period of use assets. Used as fixed assets, form an inflow of economic benefits from the use of which is evenly distributed over time. Equally important in the application of this method is the useful life of an asset that the company must evaluate yourself based on the intensity and other conditions in use.

The method of reducing the residual value, on which annual depreciation is calculated by multiplying the residual value of the object at the beginning of the year or the original value at the date of the start of depreciation and annual depreciation.

The method of accelerated reduction of the residual value, on which annual depreciation is calculated by multiplying the residual value of the object at the beginning of the year or the original value at the date of the start of depreciation and annual depreciation rate, which is calculated based on the useful life of the object, and doubles.

Cumulative method by which the annual amount of depreciation is calculated by multiplying the value that is depreciated, and cumulative ratio. The cumulative rate calculated by dividing the number of years that remain until the end of the expected life of a fixed asset, the amount of the number of years of its useful life. The advantage of this method is that at the beginning of the operation is written off most of the value of fixed assets, write-off rate further slowed down, thus reducing production costs.

The production method by which the monthly depreciation is calculated by multiplying the actual monthly volume of goods (works, services) and production rates of depreciation. The production rate of depreciation is calculated by dividing the value that is depreciated, the total amount of goods (works, services), which the company expects to produce (perform) with the use of fixed assets [11].

Each method of depreciation must pursue a common staff provide a systematic and rational allocation of the purchase price for long-term asset depreciation for future periods of its useful life. Enterprise chooses depreciation method and can modify it under the condition that the new method is received greater economic benefits from its use.

When selecting methods should be guided by the following principles:

- line method of depreciation impact of physical and moral deterioration and performance economic environment;
- compliance with applicable legal and regulatory requirements permitted depreciation methods and useful life limitations objects for their respective classification for depreciation of fixed assets;
- feasibility of various methods, including accelerated depreciation and useful life in accordance with the financial and property status of the enterprise;
- line depreciation method and useful lives of fixed assets write-off position playing the needs of logistics [12].

The depreciation starts from the month following the month in which the asset was fit for use in business activities and held monthly.

1 section 3 of article 138 of the Tax code of Ukraine (TCU) [9] allowed the use of depreciation methods, with the exception of production, and P(C)BU № 7 "Fixed assets" [8], however, in the 3 section 3 of article 138 of the tax code [9] is set to the minimum allowable useful lives of fixed assets. In particular, the minimum allowable useful life for machinery and equipment is 5 years, vehicles – 5 years, tools, devices and equipment – 4 years [9].

The economic meaning and purpose of depreciation is to ensure the restoration and recovery of property, modernization and reconstruction of production and it can not be used for other purposes other than capital investments. Despite the lack of clarity in the regulatory provisions regarding the use of the depreciation fund for 2010-2014. The value of investments by source of funds increased by 49%, or 235.7 thousand UAH.

In the leading countries Shock legislation other than the traditional uniform depreciation write-off involves the use of preferential order of depreciation of equipment (accelerated depreciation). The aim of this approach is to encourage intensive upgrade of production and overcome the obsolescence of technology. Accelerated depreciation rates used in the US, UK, Germany, Japan, France, Italy and other countries. In Germany permitted the cancellation of 40% of the cost to purchase new equipment for the first year of operation.

Since the national practice of economic depreciation is currently one of their sources of financing reproduction of fixed assets, and subject to reduction in the yield of production activity and decreased funding from lending – as the main source of investment, therefore the study of depreciation and amortization policies and their regulation is the key to growth in investment activity of economic entities [13].

According to P (S) 7 "Fixed Assets", depreciation – this systematic allocation of the cost that depreciable fixed assets over their useful life (operation) [8].

As we can see, this definition does not include the phenomenon of impairment of fixed assets, although in p. 31 P (S) 7 "Fixed Assets" provides that "the loss from impairment of fixed assets are included in the cost reporting period, with the increase in the balance of the amount of depreciation ...". According to scientists, depreciation of fixed assets should be defined as the amount of decrease in the value of fixed assets from the beginning of their useful life, which is the sum of depreciation since the beginning of operation, impairment, revaluation amounts of wear and tear, reduced by the amount of useful updates the value [14, 15].

There are physical and moral depreciation of fixed assets. Physical deterioration (physical (material) operation) – is the gradual loss of fixed assets use value, that is their original technical and performance in use, which reduces the real value of their (economic operation) and therefore it can not be operated in later in production without repair. That meant purely physical wear certain items of fixed assets.

According to A.P. Shapoval, there is a third type of wear by the forces of nature, which is related to the influence of external factors that lead to their cost of fixed assets [16].

In our opinion, this type of wear can be classified as physical, expanding the interpretation of the latter. That is, when physical depreciation should understand the gradual loss of fixed assets as a result of use-value features of their use in the production process with the influence of environmental factors, resulting in a decrease of the initial cost and there is an urgent need for repairs. Consequently, depreciation and amortization due interrelated and concepts of accounting.

If the wear indicating the degree of change in the value of fixed assets from the beginning of their use in the production process, losing of value over time and production factors, the depreciation characterizes that part of depreciation transferred to manufactured products, and that value is calculated in the cost of reporting period, i.e a share operation, depreciation for a particular period. Thus, the concept of depreciation is broader than depreciation into account because the value of fixed assets transferred to the products for the duration of use, and depreciation – just over a reporting period of time and include the costs of production and operations. However, depreciation is a prerequisite for depreciation.

Based on the above, it can be argued that one of the functions of depreciation is to preserve capital at a constant level. That depreciation funds coming to the company, have purpose and are used for the reproduction of fixed assets. Thus, M. Chumachenko believes that depreciation have a dual function: they are estimated costs in production costs, and the sum of revenue from sales –source of investment financing company [17]. According to other researchers, depreciation – a process by which the value of the property, buildings and equipment allocated during its working life, and the purpose of depreciation is compensation as a result of using this initial allocation of assets.

So, thanks to sinking fund provided by reimbursement of capital to the extent of its deterioration, the money that is in circulation, the more or less long forms again accumulated capital that the acquisition of capital becomes a medium of exchange. That is why representatives of classical economics emphasized the need to create a "reserve fund of money" from the proceeds of the goods sold to reproduce worn fixed assets [18].

Thus, depreciation – a process that shows methods of accounting is the process of converting the value of fixed assets by transferring its current living labor to create finished products, goods or services. Cost of goods sold takes cash. Transformed in current cost of fixed assets also takes cash. It is important that only the acquisition of goods and cash only if complete settlement transformed from fixed assets to current cost of fixed assets as a sinking fund becomes a real source of investments in real financial resource purposes. This means that only when the process of sale of goods took place, as an economic category amortization completes its life cycle, and the accrued depreciation amount to financial support for new real investments in fixed assets.

It should be noted that the feature depreciation reflected in the fact that it uses to function only if break-even enterprise, i.e. to the actual flow of funds to the enterprise in an amount not less certain production costs, some of which will be the source of creation depreciation fund to be used for simple reproduction of fixed assets.

In order to ensure targeted use of depreciation considered proposals for a depreciation fund by reserving the costs for recovery of fixed assets at the end of life of the assets. In particular, a number of scientists are inclined to believe that the depreciation costs, which come to the company to have purpose and be used for reproduction of fixed assets [19].

This emphasizes the need to introduce compulsory transfer of businesses cash in the amount of accumulated depreciation to a special single account, thus reserving resources for fixed assets. Note that the depreciation fund formation practice existed in Soviet times. Then the amount of depreciation in its entirety attributed to an increase in depreciation fund together with its calculation. The main drawback of this procedure was that the sinking fund was formed, and the assets that it provided, were received by the company selling products if the price was below cost. In this first centralized funds transferred to the bank, then this abandoned and left them at the disposal of the company, but the use of funds is not monitored, and they are used for current needs of the company. Under IFRS depreciation is not a source of funding for new asset.

Considering the features of IFRS 16 "Property and equipment", should pay attention to a distinct identity to the standard resource concepts of depreciation, which is based on generally accepted accounting principles but does not consider renewable function amortization and financial aspects of its accrual. According to paragraph 48 of IFRS 16 depreciation for each period shall be recognized in profit or loss if they are not included in the carrying amount of another asset. The above allows the state to compensate the company by reducing the amount of depreciation tax base for the amount of deductions. Reservations actual funds for this purpose in separate accounts (as it was in Soviet times) in market conditions is not economically justified, since diverts funds from economic circulation. Depreciation can be seen as a market economy, a source of financing investments, based on its financial component – the real money in revenue from sales of goods (products and services), and which have accumulated for intended use.

Consider the features of investment resources farms. The data table 1 shows that the largest share in the structure of funding sources take their own funds: in 2015 – 55.2%, loans – 16.6, foreign investments – 24.4, the state budget – only 0.1%. Note that there is a reduction in the share of public funds. Thus, the main source of investment activity of agricultural enterprises have their own resources to weighty role to play in net profit.

**Table 1. Dynamics of structures and investment in agriculture by source revenues
(at current prices)**

Year	Total	State budget	Funds of local budgets	Own funds of enterprises and organizations	Including		Including		Foreign investors	Domestic investment funds companies, foundations, etc.	Other sources funding
					Due to depreciation	Bank loans and other loans	Loans foreign banks	Mortgages			
2012	11311252	193092	42818	9113387	480457	1204642	57238	-	124815	6431	626067
2013	16702650	180912	37000	13265717	685660	2284927	138470	2820	104392	4060	825642
2014	19085668	73253	51402	15970894	639955	2319403	368690	62467	15353	348	655015
2015	18639671	28319	47196	15718366	716181	2400214	70409	25992	43225	4393	397958

Source: calculated according to the State Statistics Service of Ukraine.

In addition to net income to its own sources also include capital depreciation in decisions on its use businesspersons received full independence. In the current environment is not able to control the proper use, resulting in cases of channeling funds for various purposes. However, the depreciation of their economic content with targeted investment destination in reproduction and renewal of fixed assets. If the amount exceeds depreciation needs to upgrade, they can and should be directed to the implementation of investment programs or capitalization. However, domestic enterprises often use depreciation for working capital rather than investment in fixed assets. Thus, control of target use depreciation fund advisable to maintain and strengthen legislation as accelerated depreciation of capital is the target of tax benefits. The economic meaning and purpose of depreciation is precisely in order to ensure the restoration and recovery of assets, modernization and reconstruction of production and can not be used for other purposes other than capital investments. Despite the unclear regulatory provision regarding the use of the depreciation fund for 2012-2015. The value of investments at the expense of financial resources increased by 49%, or 235.7 thousand UAH.

Because of inefficient depreciation policy and inflation is almost completely lost the main role of amortization – a source of simple reproduction of fixed assets. Now when calculating depreciation method companies use the residual value that has been recommended for transfer of taxation in accounting. Agriculture machinery and equipment accounted for at cost, which did not change after indexation. Most of the technical means owned farms or they rent it, worked out a more useful life and almost completely worn out, so a low cost. In calculating depreciation on residual value of equipment depreciation is ten times less than the current price of such technology.

It should be noted that the depreciation cost structure in 1990 was 10.2%, while in 2015 this figure fell to 5.7%. Total accumulated depreciation decreased almost threefold, which does not provide even simple reproduction. Obviously, this situation is caused by various factors, where the greatest impact is the reduction of fixed assets.

At the stage of agricultural production and the formation of its cost depreciation is one of the articles forming production cost. In this situation, the depreciation should be a source of investment. However, it becomes a source of investments in the sales of finished products and obtaining revenue. Most farms that are in the simplified tax system they consider methods are outdated. That is they pay the tax, the amount of which depends on agricultural land and the income obtained from economic activity, not taxable. Depreciation in most agricultural enterprises is carried out by the residual value.

Proof is the results of grouping farms the share of depreciation in the cost of primary production (tab. 2).

Results grouping show that the profitability of agricultural production increases with increasing share of depreciation in the cost of primary production. Thus, the share of depreciation in the cost structure of the seventh group of farms increased compared with the first 19.6 pct, while profitability increased by 24.2 pct.

The positive thing to be considered cover costs incurred by increasing the productivity of livestock. Thus, the level of average yields in the latter group compared to the first farms increased by 26.6%, average daily increases of cattle – 6.8%, pigs – 30.7%. This fact indicates that due to significant modernization of the process of major livestock production, which led to a noticeable increase in productivity of farm animals, could offset the costs incurred in the form of depreciation. Currently, the amount of depreciation should correspond to the actual participation of fixed assets in the production process. Compliance with the amount of accumulated depreciation and its accumulation – the issue of present and future for the review of agricultural enterprises. The size of depreciation depends on the amount of income subject to taxation. For the state - is revenue, but for farmers – the amount of funds for fixed assets. Enterprises interested in as higher depreciation rates, the introduction of accelerated depreciation methods in order to reduce the profit before tax.

Table 2. Grouping of farms by the share of depreciation in the cost of primary production, in 2015

Indicator	Group depreciation in the share of spending on primary production, %						
	I 1	II 1,01-2,5	III 2,6-5	IV 5,1-7,5	V 7,6-10	VI 10,01-15	VII more 15
Number of farms in the group units.	1025	1290	1857	1382	939	876	553
Per 1 ha of agricultural land, production costs UAH	7150	7014	7709	6421	6695	6627	6080
including material costs	5459	5041	5579	4197	4503	4228	3493
Amortization	40	128	292	402	585	799	1229
The share of material costs in total expenditures, %	76,4	71,9	72,4	65,4	67,3	63,8	57,5
The share of depreciation in total expenses, %	0,6	1,8	3,8	6,3	8,7	12,0	20,2
The level of profitability, %	12,7	18,1	8,3	4,1	8,4	11,8	36,9
including crop	9,5	21,5	9,9	6,5	7,5	12,3	17,2
livestock	25,9	7,1	4,7	-3,8	12,0	9,9	87,6
Yield: corn, ts	56,2	47,1	43,2	42,5	44,9	41,2	35,7
including maize	79,0	71,7	67,2	65,6	68,1	65,9	59,0
sunflower, ts	24,3	23,9	23,2	23,7	24,3	25,3	23,5
sugar beet and quintal	371,3	452,0	426,5	395,6	410,0	426,9	407,3
Hopes per cow, kg	4386	4614	4698	4974	5803	5901	5555
Average daily cattle	452	470	489	454	501	504	483
Average daily pig	336	351	444	472	456	483	439

Source: calculated according to the State Statistics Service of Ukraine.

It is established that the unresolved issues in the present context is the question of depreciation on long-term biological assets. Thus, the adoption of the new Tax Code of Ukraine introduced changes to the P (S) 30 "Biological assets". In particular, paragraph 11 of P (S) 30 provides that long-term biological assets fair value on the balance sheet significantly can not be determined, or if the company is a taxable income may be recognized and reflected at cost with the amount of wear and loss of impairment.

Consequently, the P (S) 30 "Biological Assets", and methodological recommendations on accounting of biological assets depreciation object is long-term biological assets measured at cost. For biological assets are measured at fair value, depreciation is not charged. Methods are provided for P (S) 7 "Fixed Assets". In our view, the most appropriate for this group of non-current assets (group 16) could be two methods: straight and production. Straight-line method is the simplest and evenly over the life of the object size into account depreciation, and production – takes into account the performance of perennial plants and adult animals, which are long-term biological assets. Use straight or production method - the choice is now. If you can determine in advance the productivity of perennial plants and adult animals belonging to the group of long-term biological assets over their useful life, it is advisable to use a production method. Otherwise, to provide objective information to better use the straight-line method. In any case, the decision to adopt the method of depreciation to be displayed in the order of accounting policies.

Some authors propose to abandon the depreciation on long-term biological assets livestock. So, V.B. Mossakovskyy notes that depreciation animals the herd in their assessment at cost leads to a systematic reduction in the residual value of the animals, while the cost of animals at fair value, systematically increase due to increase their weight and higher prices for animals due to inflation and other reasons [20]. This idea deserves attention, more research needs and can be used in amending the regulations on accounting.

The use of above proposals provide an objective forming actual production costs and depreciation of forming the chosen best method.

Note that some degree of amortization associated income tax. Generally, with an increase in depreciation rates and increasing tax rates on profits. As most farms do not pay income tax, it would be appropriate to the technical means of production for agriculture set higher depreciation charges. In practice, this can be done on the basis of factors.

For those agricultural enterprises that pay tax, you need to exempt from taxation the portion of income used for the purchase of technical equipment. In case of early sale of fixed assets before depreciation period of the tax not paid should be returned to the budget.

Thus, the accounting standards make it possible to implement a multivariate approach to the calculation of depreciation for effective cost management and, therefore, financial results. The presence of the depreciation fund does not mean the actual availability of funds that can be invested in new facilities and equipment.

It should be noted that the practice of agricultural enterprises form their own sources of financing investment through depreciation is not expressed. Thus, in terms of inflation and steady growth of prices for equipment and other fixed assets depreciation accumulation becomes unprofitable and does not provide simple reproduction, and often steer their businesses in other areas of use, not providing updated capital. Out of the situation, sees in the formation of stock funds, which are the basis of depreciation enterprises [21].

Based on the above, it can be concluded that farms advisable to create a fund to finance investment, which is the fund of funds for reimbursement and fixed assets. It should consist primarily of depreciation. In terms of display destructive phenomena in the economy proposed to UAH depreciation based on inflation, using the approved rate of inflation. Another thing we should recognize the ability to store depreciation in interest bearing accounts, with an additional source of income, such as interest on bank deposits. Thus, the fund finance investment company shall form a separate fund of funds and consist of direct depreciation, and the amounts resulting from depreciation indexed for inflation and bank interest charged on depreciation. The amount of indexation depreciation advisable to recover from profit before tax, subject to its exemption from income tax, if the farms will provide general taxation.

So, in order to implement this approach, we offer a set of investment incentives and tax innovations that include: exemption from income tax of taxable income involved in shaping the investment fund financing in the form of indexed accumulated depreciation given the level of inflation; depreciation fund deposit funds on deposit in the bank; for ease of calculation and the possibility of periodic withdrawals from the deposit is recommended for deposit agreement for one year; the fund should be directed exclusively to finance capital, the funds used inappropriately should be imposed financial sanctions; the formation and the intended use of the fund can be tax preferences regarding taxation of interest income from deposit money in a deposit account, namely the exemption of income from taxation.

More detailed consideration to the indexed cost of depreciation by revenue. After all, in terms of the overall tax system may have some difficulties in determining the tax base for income tax. When using the proposed method of release should profit allocated to index, with documentary evidence of capital funding from the fund.

Obviously, indexing depreciation from profit before tax have the opportunity to farms with a fairly stable financial position and positive financial and economic activity.

Conclusions

We believe that the above formation mechanism financing fund investment allows to form sufficient investment resources, which consist of depreciation, bank interest, at the expense of the value of depreciation, which is deposited in the account, and part of the profit before tax, which amounts indexed depreciation. The technique of forming the fund will allow companies to save depreciation resources allocated for the reproduction of capital at their indexed value, ie inflation, which will contribute to keeping the expanded reproduction of production through modernization of technical base. Obviously, this approach to the formation of the accumulation fund depreciation is possible only if the break-even operation of agricultural enterprises. In the case of loss-making operation of the business depreciation allocated to cover losses and have no purpose. This means that depreciation for fixed assets is no recovery, which leads to the conclusion of the crisis.

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Received: 24.05.2017

Reviewed: 12.06.2017

Accepted to publishing: 23.06.2017

**ECONOMIC ESSENCE OF REPRODUCTION OF FIXED CAPITAL OF THE
AGRICULTURAL ORGANIZATIONS**

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Abstract: *Introduction. Removal of sanctions by the countries of the West possible soon sets for the agricultural organizations a task of deduction of the won positions in domestic market that is impossible without existence of competently planned process of reproduction of fixed capital.*

Materials and methods. Article in general is devoted to questions of reproduction of fixed capital. In it the economic essence of concept the capital is considered, opinions of scientists on the content of the concept "fixed capital" are investigated, the author's treatment of this concept is given. In work objects of fixed capital are allocated, its structure is considered; the essence of its various structural elements captured in normative documents is shown. The question of interrelation of the terms "fixed capital", "fixed assets", "fixed assets" is especially considered, it is noted that emergence of the term "fixed assets" was caused by more subjective reasons, than objective, and its use in an initial look is inexpedient. The question of the purpose, objects, and subjects of reproduction is investigated, the thesis that the cost of objects of fixed capital is not object of its reproduction is proved.

Results. The author's treatment of reproduction of fixed capital is given as the process of change of set of the qualitative and quantitative characteristics of fixed capital for the most effective achievement of the objectives put before the organization directed by the management of the organization the treatment of a definition "a source of reproduction of fixed capital" is investigated and given

Discussion. On the basis of the formulated author's definition of reproduction of fixed capital three main stages of its reproduction from the point of view of the mechanism of adoption of administrative decisions are allocated.

Conclusion. At the end of work the conclusion is drawn on the further directions of research of reproduction of fixed capital.

Keywords: *capital, fixed capital, reproduction of fixed capital, reproduction purpose, object of reproduction, subject of reproduction, reproduction source*

JEL Classification: G31, Q10

Introduction

Today's political and economic situation in the world does not differ in stability. Instability of the American-Chinese relations, an exit of Britain from the EU, a situation in the Middle East - the general geopolitical tension cannot but influence the Russian Federation.

In these conditions upholding of political interests of Russia is impossible without existence of the strong and independent economy capable to nullify attempts of external pressure upon the country by economic methods.

The sanctions and the corresponding countersanctions imposed by the countries of the West gave a certain impetus to development of all branches of economy of the Russian Federation including branches of agrarian and industrial complex. However you should not amuse yourself with illusions - losses will only lead the economies of the EU which are estimated in billions of dollars soon to cancellation of sanctions then economic war for all Russian (including agricultural) the market will break out with a new force.

Thus, agriculture of Russia has to be ready to cancellation of sanctions within the next years, expecting considerable strengthening of the competition in domestic market. At the same time It should be noted that during sanctions of branch of agrarian and industrial complex it was not succeeded to solve the main problem - wear of material and technical resources and insufficiency of economic resources of appropriate quality that brings again a problem of reproduction of fixed capital of the agricultural organizations to the forefront

Materials and methods. At the same time in scientific literature still the terms framework is up to the end not defined and the theory of reproduction of fixed capital of the agricultural organizations is not developed. The most part of modern researchers uses K. Marx's approach in the analysis of these phenomena, losing sight of two essential aspects: first, modern researches have to begin with economy micro level, with research of regularities of reproduction at the level of the separate organization while classics of economy considered mainly these processes at the macro level; secondly, specifics of today's economy. Many scientists note that today there is a change of the essence of factors of production (see, for example, [1, page 6]). Respectively, there is a need for initial identification of essence of fixed capital as economic resource and research of process of its reproduction only on the basis of new treatment.

However before it is necessary to decide on treatment of the term "capital" originally. Many scientists began studying of this category with the historical analysis of maintenance of this definition. So, Duman M. O. notes that "Doctrine elements about the capital as about accumulation of wealth in the form of money occur at Aristotle". [2, page 4] Such approach was characteristic also of Europe 12-13 centuries, and also of supporters of early political economy. Deviation from this concept occurred only at the time of classical political economy which began to treat the capital as the accumulated resource of economic reproduction which cost increases in process of this reproduction.

During formation and development of economic science each prominent scientist stated the view of essence of the concept "capital", especially marking out this or that its property. Nevertheless, the most part of researches analyzed this definition at the macro level, without focusing attention to economy micro level. Various classical definitions of this category are given in the table below and those properties on which authors placed emphasis are marked out.

Table 1. Analysis of treatments of the concepts "capital"

Definition (The capital is)	Author	The allocated form	The marked-out properties				
			Ability to bring in the income to the owner	Is at the disposal of the organization	Self-increase	resource, means of production	The result of the previous activity (reserved)
resource (in a monetary or natural and material form), capable to bring in the income to its owner	A. Marshall	Monetary or natural	+			+	
reserved richness of time in derivation from its natural or cost form at present.	S. Fischer, P. Samuelson, F. Knight	Monetary or natural					
everything that during the known time brings in the income	I. Fischer		+				
monetary value of set of material and financial means which are at the disposal of the enterprise (at some point)	H. Shirenbek	Monetary		+			
the saved-up stocks of means of production intended for further production of goods	A. Smith					+	+
material stock - means of production	D. Ricardo					+	+

the self-increasing cost which is giving rise to a so-called surplus value	K. Marx					+	
earlier saved up stock of products of last work	J. Art. Miles						+
The capital is no other than set of intermediate products which are created at each stage of a long production cycle	O. Beem-Baverk						+
Agricultural tools, constructions, cattle and all that is used in agriculture during several production cycles and represent "initial advance payments"	F. Kene	natural				+	

Treatments of modern Russian scientists in a varying degree repeat the presented definitions. At the same time It should be noted that in Russia after all there is an alternative treatment of the capital as "investments of owners and the profit which is saved up for all the time of activity of the organization", accepted in the concept of development of accounting in the Russian Federation which most of scientists and interns in the field of accounting use. However, it is worth noticing that operations in accounting are reflected in the basis of their economic essence - therefore, in our opinion, the accounting treatment of both the capital, and operations with it should not contradict its actual essence and the standard economic concept.

If to take for an axiom that the capital in the organization possesses all same properties, as the capital at the macro level, then it is possible to formulate the following definition of the concept "capital of the organization" is one of economic resources which qualitative and quantitative characteristics are a consequence of functioning of the organization in the past (or a consequence of its creation), having the natural and cost embodiment at which rational and effective use in the course of economic circulation its cost changes on condition of the fact that the organization has the right as the income of part of a surplus value.

On the basis of it we consider what wrong would be to include in structure of the capital various natural resources, such as the land plots, productive cattle since they enter a factor of production "earth".

At the same time it is necessary to isolate accurately the fixed and working capital of the organization for the purpose of elimination of terminological and other distinctions.

K. Marx was one of the first scientists who divided the capital. [3]. On it, the circulation of fixed capital consistently includes phases of wear, depreciation and compensation in a natural form. Respectively, K. Marx as "a special way of transfer of cost" meant depreciation.

Trubin A. E. allocates the following signs of fixed capital:

- are expediently used in production;
- collect and develop as a result of an investment of investments;
- serve a long time;
- transfer the cost to a product during the whole time of the service; [4, page 10]

Danilina E. I. gave treatment to working capital: "working capital - the money advanced on a covering of the operating costs of firm connected with production (works, services) and on its financial activity which cycle of reproduction (addresses) does not exceed one year". [5, page 27]

However the analysis of these treatments does not allow defining and identifying fixed capital unambiguously. We consider that it is not possible to allocate this category on the basis of expediency of use in production, any capital collects and develops as a result of investments; besides, all capital is connected with production process. Respectively, for a final decision of a question of expediency of allocation of categories of the fixed and working capital for our research it is necessary to analyze the existing definitions of this definition for the purpose of allocation of its main distinctive properties.

By today's moment a great number of researchers analyzed economic sense of this definition - it is possible to carry such modern Russian economists as Zaurskaya S.G., Onufriyeva A. S to their

number., Abakumov R. G., Trubin A. E., Fog M. O., Endovitsky D. A., Moshkin K. N., Pronyaeva L. I., Podsorin V. A., Nozdrunova N. G., Konovalova E. G. [2, 4, 6-13] - their treatments are given in the table below.

The analysis of the presented definitions allowed to define that in the scientific world there is no unity on the fact that is result of activity of fixed capital and object of transferring of its cost. However, it is necessary to tell that most of authors meet that fixed capital is a means of labor.

Considering that now the considerable part of the organizations is occupied with rendering services, we created the following treatment of fixed capital of the agricultural organizations - fixed capital of the agricultural organization is the part of its general capital having production and economic value which qualitative and quantitative characteristics are a consequence of functioning of the organization in the past (or a consequence of its creation), being a means of labor and having the material embodiment which form and properties exert direct impact on quantitative and qualitative characteristics of the made production (the rendered services) which quantity of elements does not change when using in the course of production. We will understand the concrete, isolated, having the physical embodiment means of labor as object (element) of fixed capital (for example, the building, a tractor, etc.)

The author's treatment of the concept "fixed capital" offered above forces developers not to agree with the point of view of those authors who include intangible assets and financial investments in structure of fixed capital. In our opinion, the structure of fixed capital has to join only material elements allocated, for example, in Trubin A. E. work: buildings, constructions, transfer devices, cars and equipment, vehicles, tools, production stock. [4, with. 10] at the same time It should be noted that contents and essence of components of fixed capital it is rather accurately.

After definition of terms framework it is obviously possible to pass to the analysis of process of reproduction of this economic resource. It should be noted that there are several treatments of this phenomenon. As S. A. Lenskaya and Eskinarov M. A. note., "A number of economists identify reproduction of fixed capital with its updating or replacement, paying paramount attention to features of investment process and an assessment of efficiency of investment investments, and also creation of rational schemes of financing of capital investments" [20].

The second widespread concept is based on treatment of reproduction of fixed capital as on compensation of cost of work. This point of view, Korobeynikova O. O. defends, for example, [20].

Table 2. Main approaches to definition of the term "fixed capital"

Definition (Fixed capital is)	Основные характеристики			
	Purpose (end result) of functioning	Essence	Object of transferring of cost	Other important characteristics
The part of the cumulative capital directed to acquisition of fixed assets of an economic entity [13, page 21]	Acquisition of fixed assets			
The size of the capital advanced in instruments of labor [6, c.7]		The capital advanced in instruments of labor		
These are the assets of production and economic appointment which are results embodied in them work reused in economic processes and reproduced in an invariable natural form due to gradual transfer of the cost on the cost of the realized goods [7, c.11]				Have production and economic appointment
The economic resource which is dynamically developing in the course of certain public relations (human activity) acting as a production factor for a long time used as means of labor for receiving economic benefits functioning in an invariable form and transferring the cost during a number of the periods to results of activity, providing at the same time process of self-development and self-preservation (or reproduction process) by change of the functional forms [8, c.8]	Receiving economic benefits	Economic resource, means of labor	Results of activity	Functions in an invariable form, transfers the cost to results of activity
Economic category, reflecting branch specifics of formation of a stock of production resources which functioning during certain time by means of partial		Stock of production resources	Again created goods and services	

transfer of the cost for again created goods and services provides process of self-reproduction in a cost and natural form, and in the conditions of effective use is a source of the regular income of the enterprises [4, with. 9]				
Production means of production or the benefits which can be used for production of future benefits [2, with. 10]	Production of the benefits	Means of production		
Fixed capital is one of components of the productive capital, completely and reused in production of goods, transferring the cost to a new product in parts during long term and returned to the businessman in a monetary form also in parts. 9, with. 3			New product	Comes back to the businessman in a monetary form in parts
Understanding part of the productive capital of the organization which is involved in process of production and transfers the expenses parts to the made production 10, with. 1			The made production	Transfers the expenses parts
The capital embodied or embodied in the means of labor having a material or non-material basis, used during the long period and promoting receiving any useful result 11 with. 10	Receiving useful result	Means of labor on a material or non-material basis		
The part of the productive capital which completely and repeatedly participates in production and reflects the cost recorded in is long the functioning objects [12, with. 8]				Reflects the cost recorded in it is long the functioning objects

E. V. Hlynin and Gorodnichev S. V. allocate also production approach to the analysis of reproduction: meaning by it definition of reproduction through ensuring process of production with means of labor. [20, with. 1]

Table 3. Maintenance of components of fixed capital

Group of elements	Definition	Source
Building	"and (or) underground speak rapidly the result of construction representing the volume construction system having elevated, including rooms, networks of technical providing and system of technical providing and intended for accommodation and (or) activity of people, placement of production, storage of production or keeping of animals"	Subitem 6 of item 2 of Art. 2 [14]
	"the architectural and construction objects intended for creation of necessary working conditions and storage of material values, the constructions occupied with production, non-productive and service departments and services of the enterprise"	[15]
Construction	"elevated and (or) underground speak rapidly the result of construction representing the volume, plane or linear construction system having land, consisting from bearing, and in some cases and the protecting building constructions and intended for performance of productions of various look, storage of production, temporary stay of people, movement of people and freights"	Subitem 23 of item 2 of Art. 2 [14]
	"the construction objects intended for creation of the conditions necessary for implementation of process of production by performance of these or those technical functions which are not connected with change of objects of the labor or for implementation of various non-productive functions"	[15]
Transfer device	the power lines, pipelines and other devices having independent value and not being a component of the building or a construction, etc.	[15]
Cars and equipment	the devices transforming energy, materials and information.	[15]
Vehicle	the vehicles intended for movement of people and freights (a rolling stock of the railway, water, air and motor transport, etc.), means of floor production transport, and also vehicles of other types	[15]
	the device intended for transportation across roads of people, freights or the equipment installed on it	Art. 2 [16]
Production stock	objects of technical appointment which participate in production, but cannot be carried neither to the equipment, nor to constructions (to capacity for storage of liquids, devices and a container for loose, piece and piece materials, desktops, racks, etc.)	[15]

Authors consider that each of the above described approaches considers reproduction process only on the one hand; respectively, in the course of scientific research it is necessary to consider the existing definitions of reproduction of fixed capital, to mark out its distinctive features, to identify its components (the purpose, objects, subjects, the principles, stages) - it will allow to create complete and comprehensive definition of the concept "reproduction of fixed capital". Researched this category Hlynin E.V., Agoshkova N. E., Agoshkova N. N., Gorodnichev S. V., Muzyreva A. V., Abakumov R. G., Negodenko V. S., Onufriyeva A. S. Their views of contents of this term are given in the table below.

Table 4. Treatments of the term "reproduction of fixed capital"

Definition (Reproduction of fixed capital is)	Main characteristics	
	Type of process	Economic essence of process
Constantly renewable, having cyclic character process of functioning of means of labor including consecutive passing of all stages of a reproduction cycle [21, with. 14]	Cyclic, constantly renewing	Process of functioning of means of labor
process of the continuous movement of fixed capital for the subsequent its renewal [8, with. 11]	Continuous	Process of the movement of fixed capital
improvement of their technological and branch structure, production device, increase of specific weight of their active elements [22]		Process of improvement of structure of fixed capital
regularly repeating process of consecutive change of stages of creation of new means of labor, their input in operation, productive use, leaving and updating [7, with. 11]	Regularly repeating	Process of change of stages of creation of new means of labor

Results. It was presented definitions do not allow giving the general answer to a question of economic essence of this process. It, according to authors, has the following basic distinctive characteristics:

1. Purpose
2. Tasks
3. Object
4. Subject

The central characteristic among above-mentioned, in our opinion, is the concept of the subject. The subject, it agrees [23, T. 3] - the carrier of activity, consciousness and knowledge. In relation to economic realities, the performer of this process, that is, the management of the organization has to be understood as the subject of reproduction.

Object of any process is "what activity (real or informative) activity of the subject" [23, T is directed to. 3], the purpose - "final result to which process is purposely directed". [23, T. 4, page 317]. Still K. Marx focused attention to need of separate consideration of natural reproduction and cost; allocated consumer and exchange value of fixed capital. In our opinion, most of modern researchers unfairly bring to the forefront of studying of a cost cycle of reproduction.

Any object which is a part of fixed capital has the material form and some technical characteristics. Use it in production economic activity of the organization means that its qualitative and quantitative characteristics influence qualitative and quantitative characteristics of result of that process in which implementation this element of fixed capital was involved.

Proceeding from technical characteristics of fixed capital its cost is formed. Still K. Marx divided the exchange and consumer value of the capital. According to the classical treatment given, for example, in Podsorin V. A. thesis, the consumer cost of objects of fixed capital "represents their ability to make a product necessary to society or service, to save and facilitate work, caused by set of technical and operational properties of concrete objects and their elements. The consumer cost of means of labor is shown in their different economic efficiency, and their efficiency depends on extent of use" [11, with. 10]

However, according to authors, it is impossible to recognize this treatment completely successful. In our opinion, the category of value of an element of fixed capital has to be initial category. Value in a general view is importance, the importance, usefulness. Besides, the value of any object is result of process of estimation which subject are people. As V. V. Galasyuk notes: "in the markets except buyers investors there are also users of assets [occupier] for whom the cost of an asset is determined not only that cost [value] for which this asset can be acquired by buyers investors, but also its usefulness [utility] for the user." [24, with. 2]

In the case considered by us the value of an element of fixed capital is the subjective category reflecting opinion of personnel of the organization concerning degree of applicability of this or that element of fixed capital for performance of its functions (that is, level and an orientation of impact of its components on characteristics of products or the rendered services) in this concrete time taking into account the perspective directions of development of economy and size of the financial streams connected with existence and use of this or that element of fixed capital in the organization.

This value is the main for formation of consumer cost of fixed capital. The consumer cost of an element of fixed capital - size changeable that is caused by continuous change of its technical characteristics and various market factors. The same element of fixed capital with identical consumer cost can have the different price (exchange value) in different market conditions and vice versa. Schematically the mechanism of formation of consumer and exchange value of fixed assets is given in drawing below.

At the first stage, after creation of an element of fixed capital on the basis of labor and cost expenses selling prices of production are defined with rate of return by plant (its exchange value is formed). Further the buyer, proceeding from the purpose of acquisition of these goods (resale or further use), estimating technical condition of fixed assets, factors of the market environment, forms for itself its consumer cost - at coincidence of exchange and consumer price the transaction is made and, thus, the market value of elements of fixed capital is formed. Still Xenophon noted that the value of goods for the seller and the buyer is various.

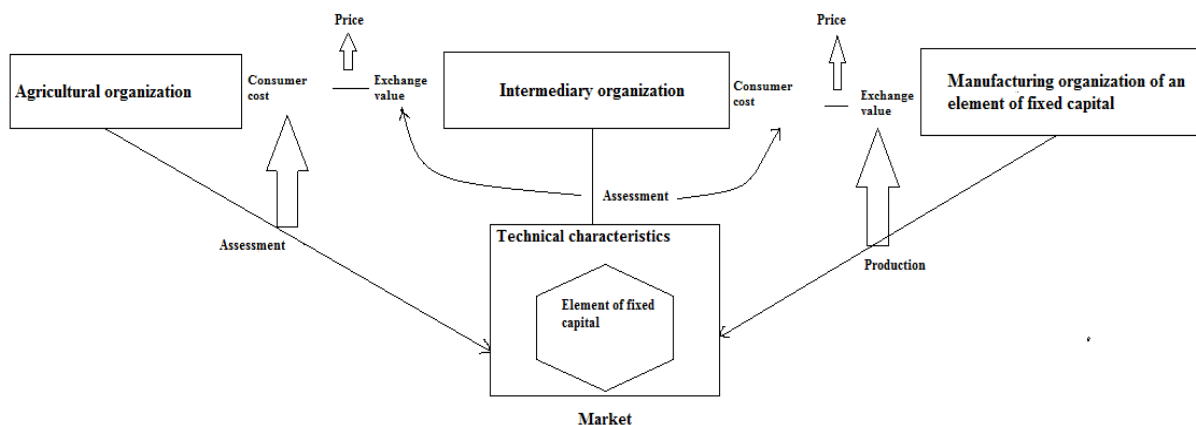


Figure 1. Mechanism of formation of consumer and exchange value of an element of fixed capital

Besides, there are also other types of cost of elements of fixed capital. For example, in accounting there is initial, residual and recovery cost of fixed capital. However such assessment of elements of fixed capital is rather far from market, and, according to the author, in the conditions of modern economy paramount orientation to reproduction of cost of fixed capital does not guarantee successful and effective functioning of the organization.

Cost is category practice subjective, besides depending on a set of external factors. Standard today to use the initial cost of fixed capital in all calculations distorts information as it in many respects does not correspond to characteristics of object of fixed assets - it is admissible that the organization managed to get an element of fixed capital at the price, below average market with technical characteristics, it is better than analogs - it speaks only about effective work of the relevant

services of the organization, and not about inefficient process of reproduction in any way. The market value of objects cannot be also recognized by optimum object of reproduction, first, because of essential errors in its definition, and, secondly, because of a possibility of obtaining its negative value that, in our opinion, is wrong as "the concept of "market value" by definition reflects either sale, or the transaction of exchange, but not the transaction of donation to the so-called buyer at all. It is, in fact, turns the buyer in presented" [24, with. 6]. Let's quote the International standards of an assessment: "6.9. In exceptional circumstances market value can be expressed as negative result. Such situations include the property burdened by the rights of rent, some specialized objects of property, the depreciated property, costs of which elimination exceed earth cost; some types of property which environmental pollution, etc." [25 affected, with. 106]

We consider that the main object of reproduction of fixed capital is not its cost, but set of qualitative and quantitative characteristics of fixed capital which improvement is the reproduction purpose.

Subject of reproduction of fixed capital are the operating bodies of the organization. Thus, reproduction of fixed capital can be defined as the process of change of set of the qualitative and quantitative characteristics of fixed capital for the most effective achievement of the objectives put before the organization directed by the management of the organization.

Change of characteristics of elements of fixed capital can be made in the different ways. As a rule, it is connected with the movement of cost. Shaina I. V. understands as sources of reproduction "herself the sources of the financial and material values having a monetary assessment, acting as financial resources in the course of reproduction of fixed assets" [26, with. 9]. However, in our opinion, not always process of reproduction is connected with existence of financial resources. In the agricultural organizations still popular way of calculations is payment in finished goods, besides, change of technical characteristics of objects of fixed capital can be made by own forces of the organization - in all these cases financial resources indirectly and are indirectly involved in reproduction process. Thus, it is possible to understand the part of economic resources of the organization isolated on any sign which ultimate goal of use is change of set of qualitative and quantitative characteristics of fixed capital as a source of reproduction of fixed capital.

Discussion. The treatment of reproduction of fixed capital of the organization given above, among other things, forces to approach allocation of separate stages of a cycle of reproduction in a new way

As it was already noted above, subject of reproduction is the management of the organization - respectively, as the first (preparatory) stage of the studied process it is possible to allocate a stage of making decision on need of reproduction. At this stage the purpose of the separate act of reproduction, reproduction type, financing sources, etc. is defined. At the second stage process of reproduction and actions accompanying it is carried out directly. The third stage is process of operation of an element of fixed capital. At the same time, it should be noted that subjects of reproduction constantly make an assessment of a condition of the market and current state of elements of fixed capital - and at observance of certain conditions process of reproduction is started.

Conclusion. Summarizing material of this research, it is possible to allocate the following received scientific results:

1. Opinions of different scientists are studied and the interrelation of the categories "fixed assets", "fixed assets", "fixed capital" is analyzed; inexpediency of their use as synonyms as it can lead to terminological confusion is defined;

2. The author's treatment of the concept "reproduction of fixed capital" on the basis of the analysis of 4 main components of this process is presented: purposes, tasks, object, subject of reproduction;

Further scientific researches in this direction, in our opinion, have to be carried out in the direction of development of methods of an assessment of result and other characteristics of reproduction process, and also algorithms of impact on it.

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Received: 29.05.2017

Reviewed: 14.06.2017

Accepted to publishing: 23.06.2017

**FEATURES OF THE TERRITORIAL ORGANIZATION
OF PRODUCTION IN THE AGRICULTURE OF THE REPUBLIC
OF KAZAKHSTAN**

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Abstract: *The analysis of the current state and problems of the development of agriculture, the share of agriculture in gross domestic product of the country and the ratio of industries in gross agricultural output are analyzed. The advantages of rational allocation and specialization of agricultural production, as well as the criteria for division into industries are considered. The analysis of territorial specialization of agriculture of the Republic of Kazakhstan is carried out, recommendations for its optimization are given.*

Key words: *agriculture, food security, territorial division of labor, territorial specialization, optimization.*

JEL Classification: Q01, Q18, H70, O13

The solution of the problem of food security of the country and its regions is closely connected with the improvement of the territorial organization of agriculture, progressive changes in its structure, obligatory consideration of the natural, ecological and socio-economic factors in the development of agricultural production. The vastness of the territory of Kazakhstan and its regions influences the territorial differentiation of agricultural production, its results and, as a consequence, the uneven distribution of food.

All this requires a comprehensive analysis of the types of agricultural use of lands, agricultural zoning and determination of opportunities for their optimization. It is no accident that the issues of territorial differentiation of agriculture are the object of research of both domestic and foreign scientists [1, 2].

The formation and development of the agrarian sector of the region largely depends on the specifics of the conditions and factors of agricultural production. The more diverse and geographically more differentiated the natural and economic conditions of the region, the more the structure of the regional agricultural system and the degree of its participation in the territorial division of labor are more complex.

The effectiveness of the functioning of the agrarian industrial complex of the republic substantially depends on its rational location, specialization and a combination of industries.

The share of agriculture in gross domestic product of the country is about 4.2% and can not change significantly in the near and long term. It is caused by the growth of amounts in the oil-extracting industries, the limited capacity of the domestic food market, the instability of foreign agricultural markets, the weak competitiveness of the Kazakhstan products due to high transport costs and low level of agrarian technologies.

In general, the ratio of crop production and livestock in the republican gross production of agriculture is 58.5 and 41.5%. In general, crop production is developed in the North-Kazakhstan and South-Kazakhstan regions of the country, and animal husbandry - in the West Kazakhstan region of the country.

Agricultural enterprises, specializing in the production of different types of products, occupy a certain place in the public division of labor. Among them farms with the primary production of one or another type of products, including grain, meat, dairy and etc. are formed

The advantage of rational distribution and specialization of agricultural production is the possibility of the most complete use, first of all, of favorable natural conditions and, on the basis of them, the creation of economic opportunities to increase agricultural production in accordance with market demands and its price reduction [3,4].

The allocation of industries in an agricultural enterprise is connected with the mechanization and automation of production, the introduction of new technologies, forms of organization of labor and production.

At the level of the agricultural enterprise, the following criteria are used as the basis for the division into industries:

- the type and purpose of the products or services;
- features of the means of production (objects and tools);
- technology and production organization;
- professional qualities of workers [5].

On the economic importance commodity agricultural industries in enterprises are divided into basic and additional. Industries which determine specialization of the enterprise and have the greatest share in its marketable output are the main. The largest main industry is called main. Additional industries are intended for the production of additional marketable product. They are created with the purpose of providing favorable conditions for the development of the main industries and increasing of the enterprise income [6].

It is necessary to consider the specialization of regions, which determines the production direction of farms. The production direction most often is determined by the structure of commodity output over the last 4 years. Level and coefficient of specialization are the main indicators of specialization. We will calculate the coefficient of specialization according to the formula:

$$Cs = 100 / Wi (2i-1),$$

where: Wi - the specific weight of the commodity output of separate industries, %;

i - the serial number of the type of commodity output in the ranked row on the specific weight in the amount of sales proceeds, starting with the highest.

The specific weight of branches in the structure of commodity output most accurately characterizes the level of specialization. It allows to identify those types of products with which the enterprise acts in the public division of labor. Besides, the structure of gross output also reflects specialization.

According to theory, if as a result of calculation the coefficient is less than 0.2 - this means a weak degree of specialization; it is equal 0,2 - 0,4 - average; 0,4 - 0,6 - high; more than 0,6 - very high (in-depth) specialization [7].

By geographical location, the country's economy is divided into five major economic regions. *Table 1* shows that the North-Kazakhstan region has a well-developed crop production, the level of specialization in this area over the past five years is more than 0.65, which means that a very high (in-depth) specialization in crop production. And for animal husbandry, the average level of the specialization coefficient over the past five years is not more than 0.40. In general, the North-Kazakhstan region is one of the leading in the structure of agricultural production in the Republic of Kazakhstan, which includes Kostanay, North Kazakhstan, Akmola, Pavlodar regions and the city of Astana.

Natural conditions have a special role in the development of agriculture in the region. The territory of the region belongs to the continental steppe of the West Siberian climatic region. The dominance of moderate air masses, the position in the center of the continent, the flat relief gives the climate a sharply continental character: large average and absolute air temperature amplitudes, insufficient moisture, cold, prolonged winter with a stable snow cover, short warm summer [8].

In the Southern Kazakhstan region the crop production is the main industry, the level of specialization in this direction is 0,42 over five years, the animal husbandry is an additional branch, the specialization rate coefficient is 0.31. According to the theory, the coefficient 0.2-0.4 characterizes

the average level of specialization. During the research Kyzylorda, South Kazakhstan, Zhambyl, Almaty regions and the city of Almaty have been united in this region. In this region generally cotton, grain crops, vegetables, fruits and melons are grown on the fields. In animal husbandry - sheep breeding, including a karakul breeding is well developed.

Table 1. Coefficients of specialization of the regions of the Republic of Kazakhstan

Regions	2012		2013		2014		2015	
	crop production	animal husbandry	crop production	animal husbandry	crop production	animal husbandry	crop production	animal husbandry
North Kazakhstan	0,63	0,41	0,67	0,40	0,66	0,41	0,65	0,41
South Kazakhstan	0,41	0,32	0,42	0,31	0,44	0,31	0,43	0,31
East Kazakhstan	0,40	0,33	0,36	0,34	0,37	0,34	0,37	0,34
Central Kazakhstan	0,40	0,33	0,48	0,33	0,43	0,31	0,44	0,32
West Kazakhstan	0,40	0,37	0,33	0,38	0,31	0,34	0,35	0,36

In the East Kazakhstan region the specialization indicators are at the average level, the specialization ratio is 0.37 for crop production and 0.33 for animal husbandry. This is explained by the fact that in the region the branches of industry, including non-ferrous metallurgy, machine building and metalworking, timber and woodworking, light and food industries are well developed. In the East Kazakhstan region, crops are cultivated, from the technical ones - sunflower, fodder crops, potatoes, vegetables, in the southern regions - possibly horticulture and viticulture. There many animal husbandry sectors are also represented: sheep breeding and goat breeding are developed in the arid western part, cattle breeding in the foothills, horse breeding in the mountainous regions, pig breeding in the northern and northeastern parts. The East Kazakhstan region is the only region in Kazakhstan where the breeding of Siberian deer develops. Beekeepers of the region receive wonderful Altai honey. The reservoirs of the region allow developing the fish industry.

In the Central Kazakhstan region, the industry specialization indicators are also on an average level, but the crop production is more prevalent, the level of specialization is 0.43 on average over the past four years. And the level of specialization of animal husbandry averages 0.32. Central Kazakhstan is located in the arid zone. The climate is sharply continental. The relief with small hills, arid climate, low water availability of the territory, low-yielding soils do not allow to develop agriculture on the most part of the region. These lands are used as natural, low-grass pastures for sheep breeding. However, in the north of the region crop production is developed quite well, including grain and forage crops, vegetables, potatoes, and animal husbandry is represented by cattle breeding. The main riches of the region are minerals: coal of the Karaganda basin and copper ore of Zhezkazgan, Konyrata, Sayaka [9].

In agriculture of Western Kazakhstan animal husbandry prevails, namely camel breeding and sheep breeding, the level of specialization on the average for the last four years is 0.36. And the coefficient of specialization of the crop production averages 0.34. In the northern part of the region crop production is very well developed - cultivation of grain crops. The coefficient of specialization of the West Kazakhstan region is calculated by the data of Atyrau, Mangistau, Aktyubinsk and West Kazakhstan regions. The western region has a favorable economic and geographical position, linking Kazakhstan with Russia, Europe, the Middle East, Transcaucasia and Central Asia. The territories of Atyrau and Mangistau oblasts have access to the Caspian Sea. This is a good opportunity for rural commodity producers to export their goods to foreign markets [10].

Typologization of the regions of the country in terms of territorial-sectoral division of labor contributes to more rational management of the agricultural sector. Thanks to it, standard solutions for ensuring food security can be applied. Food security is largely determined on the basis of the output of

basic agricultural products per capita. Consider the production of certain types of agricultural products per capita on regions.

From *table 2* it is visible, that Atyrau, Zhambyl, Karaganda, Kyzylorda, Mangistau, South-Kazakhstan regions and the cities of Astana and Almaty show a low level of meat and milk per capita. In these regions, the volume of production of meat and milk per capita is lower than the average output per capita in the republic. The highest level of production of meat products is observed in Aktobe, Almaty, North-Kazakhstan, East-Kazakhstan regions and the highest milk production per capita - in Akmola, Kostanay, Pavlodar, North-Kazakhstan and East-Kazakhstan regions.

Table 2. Grouping of regions on the production of livestock products per capita, 2015

Meat and meat products, kg		Milk, kg	
<i>Low level: less than 55.1 kg</i>		<i>Low level: less than 303.3 kg</i>	
Atyrau	44,5	Atyrau	115,6
Zhambyl	51,2	Zhambyl	267,5
Karaganda	51	Karaganda	283,5
Kyzylorda	22,4	Kyzylorda	115,9
Mangistau	10	Mangistau	14,9
South Kazakhstan	38	South Kazakhstan	256,1
Astana city	0,1	Astana city	2,1
Almaty city	0,7	Almaty city	7,6
<i>The average level: more than 55.1 kg and less than 65.1 kg</i>		<i>The average level: more than 303.3 kg and less than 400 kg</i>	
Akmola	62,6	Aktobe	370
West Kazakhstan	58,7	Almaty	333
Kostanay	62,1	West Kazakhstan	358,2
Pavlodar	59	-	-
<i>High level: more than 65, 1 kg</i>		<i>High level: 400 kg</i>	
Aktobe	78	Akmola	477,7
Almaty	150	Kostanay	408,2
North-Kazakhstan	95,6	Pavlodar	471
East Kazakhstan	100,8	North-Kazakhstan	822
-	-	East Kazakhstan	557,9

From *table 3* it is visible that in seven regions and cities of Astana and Almaty potato production per capita is lower than the average production per capita in the country. Akmola, Almaty and East Kazakhstan regions show an average level of production. In these areas potato production per capita averages 332 kilograms. And the highest production is observed in South Kazakhstan, Pavlodar and North-Kazakhstan regions, in these regions potato production per capita is 400 kilograms. In Mangistau region, potatoes are not grown at all [11].

Table 3. Grouping of regions on the production of crop production per capita, 2015

Potatoes, kg		Vegetables, kg	
<i>Low level: less than 280 kg</i>		<i>Low level: less than 214 kg</i>	
Aktobe	103	Akmola	86,8
Atyrau	29	Aktobe	78
West Kazakhstan	102,8	Atyrau	108,8
Zhambyl	169,4	West Kazakhstan	91,6
Karaganda	211,3	Karaganda	66,2
Kostanay	213,5	Kyzylorda	94,8
Kyzylorda	97	Mangistau	8,6
Astana city	11,9	East Kazakhstan	174,1
Almaty city	0,73	Astana and Almaty cities	3
<i>The average level: more than 280 kg and less than 400 kg</i>		<i>The average level: more than 214 kg and less than 400 kg</i>	
Akmola	329,9	South Kazakhstan	297,4
Almaty	339	Pavlodar	243

East Kazakhstan	328,7	North-Kazakhstan	333,2
<i>High level: more than 400 kg</i>		<i>High level: 400 kg</i>	
South Kazakhstan	912,5	Almaty	463
Pavlodar	466	Zhambyl	568,2
North-Kazakhstan	898,2	Kostanay	807,3

In Akmola, Aktobe, Atyrau, West Kazakhstan, Karaganda, Kyzylorda, East Kazakhstan regions and cities of Astana and Almaty, the volume of vegetable production per capita is below the national average indicator. Almaty, Zhambyl and Kostanay regions show the highest indicator on cultivation of vegetables. In these regions, per capita production of vegetables is 400 kg. A very low level of vegetable production is observed in the Mangistau region.

The results of the analysis which is carried out by us allow to draw the following conclusion: in the considered regions of the country there is no region with the specialization coefficient value less than 0.2. In all regions, the value of the specialization coefficient is in the range from 0.3 to 0.6 and this indicates that the agrarian sector of the country has all the conditions for stable development along with oil-producing industries.

Thus, the study of the whole set of issues of specialization of agricultural production requires a more detailed study of the factors and conditions that contribute to the consistent formation and development of scientific organization of placement and specialization in all its forms and at different levels of the agrarian economy. In this regard research work in this direction will be continue.

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Received: 19.05.2017

Reviewed: 07.06.2017

Accepted to publishing: 23.06.2017

PRIORITY DIRECTIONS OF AGRI-INSURANCE DEVELOPMENT IN UKRAINE

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Abstract: *The article analyzes the problems and prospects of agricultural insurance in Ukraine. It is revealed that despite the positive role of insurance in stimulating agricultural production in Ukraine it is not widespread due to the low insurance culture of the management of the farms of the corporate sector of the agricultural economy. It is established that current realities require a revision of the position regarding the establishment of mutual understanding on insurance market as policyholders and insurers. Therefore, at the present stage of development of the agricultural insurance market needs to develop effective integrated program of insurance of agricultural enterprises. Sound proposals for the development of a comprehensive agricultural insurance program, allow to consider the individual needs, financial capabilities, the specificity of production and commercial activities of agricultural enterprises.*

Keywords: *agricultural, enterprises, insurance program.*

JEL Classification: Q10, Q14, Q19

Formulation of the problem

Agriculture is one of priority directions of development of the economy of many countries. In Ukraine there is extremely powerful strategic link in the national economy that ensures food security of the country. It has a number of features which are not inherent in any other industry, namely, dependence on climatic and natural conditions and disasters in which agribusiness companies are constantly operating in the regime of riskiness and uncertainty. The most common method of risk minimization in agriculture and stabilize the income of agricultural enterprises is insurance. Agricultural insurance plays a key role in ensuring socio-economic security and is important for improving economic stability in General. In this regard, the formulation of operational measures to improve the work of the current system of agricultural insurance in Ukraine will contribute to the effective development of agriculture in modern conditions. Insurance for farmers is a prerequisite for receipt of funds in most countries of the world. However, the main problem in this type of insurance has a small number of really insurance companies, their financial weakness and lack of development of the branch network in the regions, which increases the cost and complicates the access of agricultural enterprises to insurance products, and the inadequacy of insurance services to the real needs of insurers for high rates.

Analysis of recent research and publications shows the low level of development of the agricultural insurance and inadequate national legislation, problems of agricultural insurance market functioning and providing agricultural commodity insurance system dedicated work of a number of national scientists: S.P. Smolenyuk, O. M. Kalashnikova, T.Y. Sousse, M. Kulbidu M. Demyanenko, A.S. Sholoyka and others. However, questions remain insufficiently studied settlement organizational and economic approaches to agrostrahovoho functioning market and state support in the agricultural insurance.

The aim of the article is to examine the state of development of agricultural insurance in Ukraine and proposals for improvement of insurance coverage of agricultural products.

Results of the study. International economic processes affect not only the development of the insurance of agricultural products in Ukraine, but also for public policy in this area. However, the positive experience of other countries, moved to a different political and economic environment may not give relevant results. Therefore, the best option for this interaction is a combination of international and domestic experience.

Today in the world there are two models of agricultural insurance "American" and "Western European", which are different levels of state involvement. For the "American" model, which is used in the US and Canada is a significant characteristic of income support to agricultural producers. "Western European" model characterized by a minimum participation of the state, which in the agricultural insurance provides control of private insurance companies by type of insurance. Typically, government bodies support the development of insurance of agricultural production for the purpose of stabilizing agricultural incomes. Both models have advantages and disadvantages, however, as the international experience in the practice of agricultural insurance more effective is the combination of these two models [1].

Currently, the main objects of insurance in agriculture include: buildings, constructions and agro – from damage or destruction by natural disasters, fire, explosion, theft, etc .; crops, perennial fruit plantation – if the number of destructive natural phenomena and fire; animals – in the event of death, destruction or forced the slaughter of sick through fire, natural disasters, lightning, explosion, etc.

Given the uncertain economic situation in the country, experts cautiously estimate the agricultural insurance market development in the coming years and provide a significant proportion harvest losses remain without insurance compensation.

Currently, agricultural insurance is not widespread because there are many problems that need prompt resolution. Weak and inadequate agricultural insurance system appears as follows:

1. Lack of effective and shortcomings in the current system of agricultural insurance legislation, availability of illicit flows in the distribution of government allocations, lack of available funds in agricultural commodity when required considerable amount of premiums;

2. Some ahrostrahovykiv workmanship, their low qualification and interest in the media budget, but not the full benefits of insurance.

Thus, it is clear that agricultural insurance system needs improvement. Consider how you can change the current situation into account experience of foreign countries.

The most advanced and effective programs globally considered agricultural insurance system in Canada, the US, Spain and India. Recently, most of the attention was paid to risk management in the agricultural sector. Development of quality insurance products and programs will ensure the stability of the financial situation of agricultural production and reduce the cost of the state budget to support the agricultural sector. For example, in Canada, a manufacturer can receive a subsidy or assistance from the state upon the occurrence of risk events only once.

Insurance should be based on these yields, climatic conditions, technological aspects, financial and management reporting. Without real and sufficient data to insurance companies is difficult to develop and offer the market effective insurance programs. Manufacturers and the government need to understand the importance of data security and assist insurance companies in the accumulation of information. For example, in Canada and Spain, all producers who receive grants are required to provide data on production volumes of various crops and their productivity. Also, insurance companies are able to monitor the insured crop at any time to assess the situation of risk in place. The basic principle of this approach is that if sufficient information experts insurance companies can better assess the risk profile of products and offer the best conditions of insurance.

Many countries are implementing the system of insurance against weather and catastrophic events, in order to move away from ad hoc payments upon the occurrence of adverse weather conditions. Such insurance is much cheaper for producers, as a small part offset by foregone income producer. For example, in the US catastrophic insurance offered only \$ 100 for all crops one culture in one administrative district. When the risk of catastrophic events all insured farmers receive payments at 50% of the average yield and 60% of the average sales price. Total insured farmers can rely on compensation 27-30% of the destroyed agricultural production, but such insurance is very cheap [2].

Also, some governments use weather indices to determine the level of risk for payments to affected farmers. For example, in Mexico in 2004, the government determines the level of drought and forage production using satellite measurements of rainfall and indexes. Then the government calculates indices and the amount of assistance to farmers, which is determined based on the degree of influence of weather conditions. Another crop insurance program is the concept of productivity index

used in the countries with the highest level of development, such as USA, Canada, Sweden [3]. According to the program estimate losses made not by individual households, and according to the average yield in the administrative area. Compensation for damages is held in equal proportion to all insured households, in the event that the average yield in the administrative district of lower average long-term level of productivity in the area. The main users of these programs is medium, small and newly created agricultural producers.

In some countries, governments give special subsidies to insurance companies to ensure equal access for different groups of agricultural producers for insurance services. International experts from the agricultural insurance believe that the most effective state support system of agricultural insurance is subsidizing various activities for insurers.

Thus, international experience of recent years shows that in most of the attempts to introduce agricultural insurance system or modify existing ones. It should be noted that in the world there are examples of ideal agricultural insurance programs, but the error rate in different countries is very different, which is proof that any program, especially our country, should be carefully planned and carefully implemented.

Today in Ukraine the dynamic process of development of the insurance industry continues, which is one of the main sectors of the financial sector. Extensive international experience has been accumulated, study and synthesis which will enable Ukrainian insurance market to reach new frontiers.

Considering the current state of the agricultural insurance market in Ukraine, it should be noted that it takes place far advanced in the world. Even given the global trend towards recession and crisis, Ukraine still remains a country with underdeveloped insurance market - agriculture in particular.

Risk insurance of agricultural production in developed countries is the most effective mechanism to ensure continuity, balance and stability of the agricultural market and one of the effective methods of compensation in this segment.

In Ukraine, the figure is characterized by low-coverage insurance field (less than 5%), although statistics confirm increased risks of loss in this segment [4].

Macroeconomic performance indicators of the domestic agricultural market indicate the following features of its development: According to 2004-2007. There is a significant growth of key indicators, due to the state support farmers through input subsidies for insurance premiums; of 2009 marked a sharp decline indicators, due to the abolition of subsidies; in the next five years the market is adapting to work in difficult conditions; since 2013 market indicators are descending in nature because of the deteriorating overall economic situation in the country and the world. Significant reduction of 2014 the volume of insurance premiums to insure agricultural risks due to the depreciation of the currency, which caused many farmers refuse to conclude insurance contracts. The reduction of the area of the insured for the same period can be explained by political and economic situation in the country. Thus, the annexation of the territory of Ukraine provoked a loss of opportunities for the development of agricultural insurance, because the reduced area of Donetsk, Lugansk regions and the Crimea (Table 1).

Table 1. Dynamics of the main indicators of crop insurance in Ukraine for 2004-2015 years*

Years	Number of contracts	Insured area, thous. ha	Total premiums mln. UAH
2005	910	390	13
2006	1330	670	29
2007	4397	2360	117
2008	1637	1171	155
2009	1980	510	42
2010	1217	553	72
2011	2710	786	136
2012	1936	727	130

2013	1722	869	135
2014	1392	732	73
2015	1062	689	78

**Source: compiled by the author based [5].*

In the territorial division by the number of contracts signed in 2015 to insure crops largest share Vinnitsa region (130 contracts), then – Dnipropetrovsk (101), Poltava (86). In terms of insured areas hold leadership Khmelnytsky region (129 thousand ha or 18,7% of total), Vinnitsa (63,4 thousand. Ha or 9,2%) and Kharkiv (61,1 thousand ha, 8,9%). In terms of premiums collected occupy the largest share, Khmelnytsky region (11,8 mln. UAH., Or 15,2% of total), Dnipropetrovsk (11,4 mln. UAH., Or 14,6%) and Vinnitsa (9 mln. USD., or 11,6%). Fee championship has Khmelnytsky region, which accounts for 70%, followed Zhytomyr region – 8%, and in third place Vinnitsa region – 7,9% of all payments.

Agricultural insurance market research shows a small number of sellers of these services in Ukraine. Active participants of the Ukrainian market of agricultural insurance in 2014 was only 16 insurance companies that have licenses for insurance of crops [6]. Among the 12 insurers in Ukraine in 2015 can distinguish four most active in the segment of agricultural insurance PJSC "PZU Ukraine", JSC "Finist", JSC "AXA-Ukraine", JSC "INGO Ukraine". With the participation of insurance companies in the performance indicators of the domestic market share is the largest agri-JSC "PZU Ukraine" – 28,1%, followed by PJSC "Finist" – 20,9%, in third place PJSC "AXA-Ukraine" – 16,0% [5].

The largest share in terms of area and the insured income insurance premiums insurers take such PJSC "INGO Ukraine" – 29,1% and 17%; JSC "PZU Ukraine" – 20,1% and 20,9%; JSC "Finist" – 14,6% and 27,8%; JSC "Tecom" – 9,8% and 5,8%.

The proportion of insurance claims dominated by insurance companies JSC "INGO Ukraine" and "Tecom" 44,5% and 38,7% respectively. However, these insurers largest loss rate, indicating a high level of benefits and thus fulfill their obligations to policyholders.

The number of insurance contracts and the percentage of the insured area in 2015 dominate winter wheat 41,9% and 58,1% respectively. In 2015, significant payments were made under insurance contracts winter wheat total loss for the period of wintering – 75,1%. After assessment of the level payments for insurance culture in 2015, the most unprofitable Culture – winter rye.

The high level of payments for 2015 accounted for crops: winter rye (65,4%); corn (20,3%); winter wheat (15,4%). Among the list of programs offered insurance to protect crops dominated by "total loss for the period of overwintering" (93,9% of total premium income). Risk is in much smaller proportion – only 7% of all contracts.

Today, farmers use a limited number of risk insurance coverage program and a small range of services. There is no full crop insurance spring and winter crops in the spring and summer. Almost no agreements concluded in crop insurance for the entire growing cycle. This situation demonstrates the high value of these products and the desire of farmers to reduce the price of the security. Overall size of the insurance rate is an important indicator for the insurer in deciding whether a contract of insurance of crops. The average annual insurance premium rate for the last 5 years reduced (2011 – 3,74%, 2013 – 3,1% 2015 – 2,0%), "due to a contract of insurance with an unconditional franchise at 50% which provides for compensation only catastrophic losses". In addition, half of all premiums collected from market consist of insurance premiums related to finance agricultural programs – 51,2% of the total [6]. Reduces the tariff rate and the use of farmers in some cases formal insurance, such as a loan.

During 2016 the market Ukraine Agri-Insurance significant changes have taken place, yet remains small number of sellers of these services. The most active participants of the Ukrainian market of agricultural insurance in 2016 was 3 insurance companies: JSC "INGO Ukraine", PJSC "Universal" and JSC "PZU Ukraine". With the participation of insurance companies in terms of domestic market agri-business in 2016 takes the largest share of JSC "INGO Ukraine" – 36,2% [5].

The largest share in terms of area and insured insurance premium revenues in 2016 took the following insurers: PJSC "INGO Ukraine" – 41,6% and 30,5%; JSC "Aska" – 22,7% and 16,2%; PJSC "Universalna" – 20,7% and 33,5% (Table 2).

Table 2. The share of insurance premiums and insurance companies insured Square Ukraine*

Company Name	Percentage of insured areas, %	Percentage of insurance premiums, %
Ingo Ukraine	41,6	30,5
Aska	22,7	16,2
Universalna	20,7	33,5
PZU Ukraine	5,1	6,0
AXA - Ukraine	4,6	6,0
Zdorovo	2,7	4,1

*Source: compiled by the author based [5].

The number of insurance contracts and the percentage of insured areas in 2016 as well as last year's winter wheat predominates 77,7% and 91,9% respectively. In 2016 most payments were made under insurance contracts total loss – 91,7%. As for insurance related state programs, it should be noted, 63% of collected premiums from the market, up from premiums of insurance-related program funding to farmers through the Agrarian Fund.

The analysis of the current state of agricultural insurance market in Ukraine demonstrates its slowdown, due to the following problems: the volume and frequency of occurrence of possible losses and the need for proper diversification; imperfect legal system of agricultural insurance market regulation and failure in full force certain regulations (government subsidies); distrust farms vesting insurance companies; artificially lowering the price of insurance coverage for activation of contracting insurance understatement activity survey companies regulated by the lack of a review in accordance with international standards.

Today, insurance companies are not always interested in making agricultural risk insurance through the huge amount of potential objects of cumulateness and ineffective system of reinsurance protection. Proof of this is the presence of insurance companies in the market that are licensed to conduct agricultural insurance, but do not show activity (JSC "Agropolis", "Ukrainian Insurance House", "Finist", etc.). And accordingly still active insurers who refuse to accept in recent years, agricultural risks insurance [7].

Despite the positive role of agricultural insurance to stimulate agricultural production in Ukraine it is not widespread because of low insurance culture of corporate facilities management agricultural economics.

However, current realities require viewing position on mutual understanding in the market of agricultural insurance as the insured, insurers will be reflected in the formation of new insurance products.

Agro-insurance schemes – a comprehensive crop insurance.

The main goal – a partial or full compensation for crop losses that occurred as a result of the occurrence of adverse natural or man-made phenomena that is only possible on the basis of a comprehensive program of agricultural insurance.

It is the most important and economically viable in terms of the completeness, quality and timeliness protect their property and property interests. Comprehensive insurance product connects the risks arising from the bank credit, logistics, marketing and production of agricultural enterprises, and most controls them. In turn, this reduces the total cost of business insurance and general financial adjustment mechanism synchronizes agricultural production. This convergence of financial institutions well developed in Western countries and should enhance the effectiveness of state support insurance [9–11].

From our point of view, to develop an effective comprehensive insurance program for farms is only possible joint participation of the insurer and the insurance company. However, it is necessary to pass the following steps to ensure insurance protection: analysis of production activities; Vulnerability; determine the most probable threats; development of complex insurance programs; integration of complex insurance programs into existing enterprise management system for agricultural risk management; preparation of proposals for the necessary preventive measures to reduce the probability of the insured event and the amount of possible damage; operational support in

the implementation of a comprehensive insurance program.

Such technology is developing a comprehensive insurance program will take into account individual needs and financial capabilities, specific production and commercial activities of agricultural enterprises [12].

Here are two possible comprehensive insurance programs farms that grow cereals and legumes:

1. The insurance company can offer the widest range of insurance, which account for almost all the major risks of agricultural enterprises, and in the process of harmonization of the volume coverage based on its wish to exclude the types of insurance that would be redundant.

2. Offering programs created on the basis of the module when the insurer adds to the core product modules that are most important to the agricultural enterprise. Some insurance companies have focused on crop insurance, others - on different types of enterprises liable to third parties by offering relevant discounts. Another of the companies are based on comprehensive programs obligatory insurance, for example, compulsory motor insurance, adding them to the other.

The proposed comprehensive insurance program is designed in a modular fashion. Analysis of the production model of agricultural enterprise can provide basic business processes that could get insurance coverage: crop production; maintenance of agricultural machinery and technological equipment; storage and transportation of agricultural products.

Critical in economic activity of agricultural producers has completeness and timeliness of payments to creditors, characterized solvency of the whole enterprise. The general state of agriculture, despite the positive dynamics of the last three years, evidence of massive defaults on the part of agricultural producers. In this regard, the actual importance of insurance failure to fulfill its obligations to creditors. Although the insurer in this situation supports the lender, the most important direction of economic activity receives reliable insurance protection, which greatly contributes to the prevention of bankruptcy [13, 14].

Thus, the main module in complex insurance programs farms, in our opinion, show that a study should be crop insurance, a period in which contracts reflected in Figure 1.

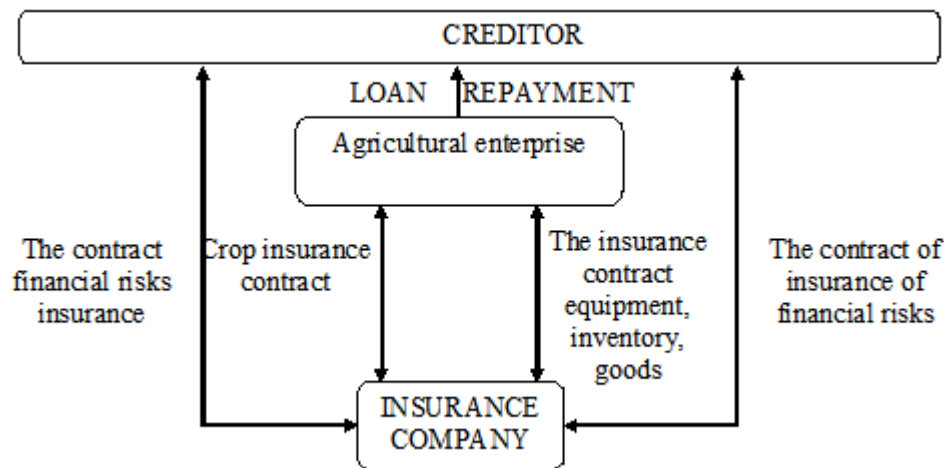


Figure 2. Scheme of complex insurance of agricultural enterprises*

**Source: compiled by the authors.*

Thus, the agricultural company receives a loan mechanization that are essential for spring field work. Insurance Company, having a modular insurance product, preparing both a company-vendor equipment, commercial and Agriculture Organization proposal for comprehensive risk insurance, which provides attractive premium payments.

The experience of many companies that implement comprehensive insurance programs in agriculture, shows significant reduction in insurance rates - an average of 25%. Such programs are cost-effective as the insured and the insurance company, since the overall risk assessment and registration of all documents while decreasing costs of doing business insurer [18].

Thus, the company supplying agricultural machinery insures lower price risks of default by their counterparty - agricultural enterprise [19]. In turn, it is advantageous if:

- insure crops as a possible crop failure could lead to loss of production activities, which ultimately affect the performance of obligations to pay loans acquired agricultural machinery;
- acquire insurance for agricultural machinery, which bought on credit;
- organize voseny insurance stocks of products in stock (elevator) because safe storage to prevent damage and in addition, provides additional income in those periods the sale of products on the market that depend on favorable pricing conditions. We believe that only this approach can expect maximum effect of an integrated approach to risk management of agricultural production [20–22].

Currently, there is no insurance product that would, above all, compensate farms possible losses from changes in prices put them material resources, as well as the fall in prices of agricultural products. In this regard, the development of new insurance products and comprehensive agricultural insurance program is the most promising area of improving the whole system of state support of insurance in agriculture.

Agricultural producers today are willing to use the services of insurance not only natural but also economic risks associated with price fluctuations primarily on resources and finished products. However, manufacturers have been difficult to determine the reasonable cost of such insurance product in the current economic conditions [15].

In addition, there is a need to improve and standardize certain procedures, including inspection of crops and loss adjustment upon the occurrence of insurance claims and optimize the conditions of payment of insurance premiums, particularly by providing opportunities to pay insurance premiums in several installments.

Conclusions. The results of the study can reach the following conclusions. During the study period (2004-2016 years). All indicators characterizing the activities of agricultural insurance markets tend to slow but reducing: the number of concluded contracts amounts insured areas and collected insurance premiums in real terms. As of February 2016 only a fifth of all insurers that are licensed for this type of insurance policies are actively selling agricultural insurance. The range of insurance services in this segment narrowed dominates winter insurance total loss, there is no full insurance in spring and summer, hardly used crop insurance for the entire growing cycle. The average insurance premium rate shows a downward trend, particularly because the use insurance products that cover a small range of unlikely risks. None insurance program guaranteeing investors, creditors, lessors. However, agricultural insurance market has potential for further development. Necessary changes have created conditions for its effective functioning. The main areas of agricultural insurance reform should include: introduction of new insurance programs guarantee reinsurance protection; accelerated development activities of insurance protection and investment lending. Also, agricultural insurance market requires systematic effort by the government to its development, including improving the regulation of existing legislation and mechanisms for implementation and provide a system of state support of this sector.

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Received: 29.05.2017

Reviewed: 10.06.2017

Accepted to publishing: 23.06.2017

**AGRARIAN SECTOR OF UKRAINE IN CONDITIONS OF FORMATION
EUROPEAN MODEL OF MARKET SURVEILLANCE**

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Abstract: *The article is devoted to the disclosure of the essence of the European market surveillance model in the member countries of the Community and its formation in Ukraine. The complex problems of transition from the post-Soviet system of control over production to European ones are highlighted. This model is based on the manufacturer's responsibility for the release of safe and high-quality food products, and the market surveillance carried out by the state for the high level of safety of the food product introduced. The compliance of food products with the requirements of EU regulatory documents is a key condition for its free movement in the single common market of the Community. The structure of normative documents on which the European model of food safety is based are revealed. The problems, which are revealed during independent audits by producers of agro-food products, are generalized. Methodical approaches for introduction of constantly operating safety procedures at small capacities of the food industry and farms for the production of primary products have been developed.*

Key words: *agrarian sector, market supervision, food safety, market operator, export power, basic programs.*

JEL Classification: Q10, Q18

Formulation of the problem

One of the key goals when signing the EU-Ukraine Association Agreement was to "introduce conditions for enhanced economic and trade relations that will lead to the gradual integration of Ukraine into the EU internal market, including through the establishment of an in-depth and comprehensive free trade area, As defined in Section IV ("Trade and Trade-related Issues") of this Agreement and to support Ukraine's efforts to complete the transition to a functioning market economy, including through the gradual adaptation of its legislation To the EU acquis "[1, art.1] and others. Consequently, in UA, a course is underway to complete the formation of a national market economy type, the introduction of regulatory mechanisms and instruments that will be equivalent to those operating in the member states of the European Union. The term "equivalent" means the following: recognition of the system of the permanent official control of production and circulation of products and raw materials of animal origin of the European Union for the system of ensuring the safety and quality of food products of Ukraine [2].

The active realization of practical steps in the main directions began in fact from the second quarter. 2014, in particular: Ukraine has been granted a preferential trade regime by 2015, and since 2016 the EU-Ukraine UAU Section, which was gradually decreasing, as well as the abolition of import and export duties and the creation of a free trade zone, entered into force.

With the signing of the UA, the spectrum and scale of the challenges for the national economy, especially for the agrarian sector, expanded significantly, the list of problems, risks and threats that the emergence and distribution of which could provoke a chain reaction of negative consequences has increased. This has posed a series of complex and diverse tasks to the agrarian sector, the comprehensive and operational solution of which will largely depend on the progress towards its integration into the internal market of the Community. Such tasks include the following:

- complete the adaptation of the legislative and regulatory framework of Ukraine to the fundamental principles and requirements of the legal and regulatory framework of the European Union;

- to continue the "splitting" of the framework and basic laws of Ukraine for the purpose of differentiating the main provisions in the field of food consumer rights protection, their consolidation in new legislative and regulatory acts for the purpose of practical realization;

- complete the transformation of the post-Soviet regulatory system of Ukraine into the equivalent of a basic regulatory model operating in the EU;

- To form a national food safety system in accordance with the requirements of the model of food safety and animal feed introduced by the EU;

- to introduce sanitary and phito sanitary measures in the agricultural sector in accordance with the European requirements of the SPS (Sanitary and Phito sanitary Steps) in order to prevent the occurrence of threats to the life of the population and the health of consumers, flora and fauna, and the environment;

- complete the formation of a network of accredited conformity assessment bodies (OIVs) based on the principles introduced in the EU;

- complete the formation and establishment of state market supervision of compliance with regulatory requirements in the field of food and animal feed safety in accordance with the model of market surveillance carried out by the state in the EU member states, etc.

It is appropriate to emphasize that state market supervision over compliance with regulatory requirements in the field of food safety is the top of the above-mentioned vertical tasks, which is based on the legislative and regulatory framework of technical regulation, harmonized with the requirements of European legislation. On this basis, there is a more detailed elaboration of food safety requirements, in particular: the parameters of the safety of food and animal feed are mandatory and are therefore enshrined in the technical regulations, and quality indicators are voluntary and therefore included in the standards. Compliance with the requirements in the field of safety and quality certified using CAB conformity assessment procedures. That is why a deep and comprehensive analysis of the situation that has emerged and permanently transformed in the field of market surveillance in Ukraine, as well as its role in prompting the introduction of permanent safety procedures based on the HACCP principles in agrarian sector enterprises will allow to assess real trends, new challenges and problems that need timely and comprehensive solution. At the same time, given the key role of the regulatory regime, the model of which is introduced in the Member States, it is important to disclose its notable characteristics in order to more objectively perceive the changes that are taking place in shaping the new market surveillance structure in Ukraine.

The main results of the study

Market surveillance activities carried out by public authorities are an integral part of the technical regulation system, which has been in place for almost ten years in the member states of the Community. Market supervision is carried out at the stage of obtaining and using the final results of production and other activities, that is, with the marketing of products. In a broad sense, products include industrial, food, medicines and medical products, as well as compliance with safety requirements on objects and transport and production processes, the functioning of which poses a potential threat to the health of the staff and passengers.

In retrospect (over forty years) EU legislation on goods (products, raw materials, etc.) has passed four stages when it finally came to market supervision, namely:

1) traditional or "Old Approach" with detailed technical and administrative requirements for products (until 1985);

2) "New Approach" (May 1985), which narrowed the role of legislation to "substantive requirements" (I e performance or functional requirements), and technical specifications for products and processes went beyond the scope of standards, and this was accompanied by the development of standardization;

3) the development of conformity assessment instruments in 1989-1993 with the aim of implementing acts of the Union Harmonized Legislation, general guidelines and detailed conformity assessment procedures (conformity assessment modules);

4) The "New Legislative Framework" (developed in 2003-2008), which was based on the New Approach and ensured the introduction and use of effective tools for assessing compliance, accreditation and market surveillance [3, p. 2-7]. Consequently, the path was followed: from the elimination of barriers and the free movement of goods in the single market, through the promotion and application of the principle of mutual recognition of products (manufactured or sold in the market in one member state should move across the Union without interruption if it meets the levels, Equivalent to that established by the importing country), until the market entry is secured and compliant with the Harmonized Union law (technical regulations and harmonized standards) of products, but it must facilitate effective consumer protection.

The most systematic new legal framework laid down in Regulation (EC) №765 / 2008 [4]. They include the following components and / or provisions: material or other legal requirements, product standards, standards and rules for the competence of conformity assessment bodies and accreditation bodies, quality management standards, conformity assessment procedures, CE marking, accreditation and market surveillance policies, including control of products from third countries. The CE mark signifies the conformity of the products to the Union legislation applicable to those products and requires the CE marking to be affixed. All of these elements are interconnected, work together and complement each other, forming a chain of quality in the European Union. If one of the elements is missing or weak, the strength and effectiveness of the entire "quality chain" is threatened [3, p. 8].

The 2014 Blueprint notes the following: market surveillance is aimed at ensuring that products meet the applicable requirements, while ensuring a high level of protection of public interests such as health and safety in general, health and safety at work, protection Protecting the environment and security, while ensuring that the free movement of products is not limited to the extent permitted by the Harmonized Union law or any other relevant Union law. Market surveillance guarantees citizens an equivalent level of protection throughout the single market regardless of the origin of products. In addition, market surveillance is important for the interests of economic agents, because it helps to get rid of unfair competition [3, p. 101].

The appeal to the Blue Guide on the implementation of the EU rules on products in 2014 [3] and its application to market surveillance in the field of food products requires some explanation. As stated in clause 1.5, the scope of this Guideline applies to non-food and non-agricultural products, which are referred to as industrial products or products for use by consumers or professionals. Legislation relating to these products will be mentioned in the text as Harmonized Union legislation, sectoral Harmonized Union law or acts of the Harmonized Union Legislation [3, p. 11]. However, the elements of this Guideline may also be relevant for another Harmonized Union law that goes beyond the scope of industrial products. This is especially true for the various definitions in the Guide, as well as in the chapters relating to standardization, conformity assessment, accreditation and market surveillance [3, p. 12], which are set out on pages 36-121. Consequently, the listed components of technical regulation have a unified legislative and regulatory framework, regardless of which products of any kind and origin, ultimately, will be subject to their regulatory action. At the same time, taking into account the peculiarities of food products and their high potential danger for consumers in cases where the requirements stipulated in the technical regulations and standards are violated, these key differences are ensured through the implementation of a number of diverse measures, in particular:

- introduction of food and animal feed safety systems at the enterprises of the agrarian sector of Ukraine, which will be equivalent to the food safety model operating in the EU member states;

- implementation of sanitary and phyto sanitary measures in the agrarian sector in accordance with the European requirements for the same SPS;

- Harmonization of domestic technical regulations and standards related to the agrarian sector, with relevant European and international regulatory documents;

- ensuring the recognition of the National Accreditation Agency of Ukraine (NAAU) by the European Association for Accreditation (EA), the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF) for the purpose of Recognition of their

accreditation systems is equivalent. This will create the necessary conditions for the introduction of mechanisms for the mutual recognition of safety and quality certificates, certificates and test protocols conducted in Ukraine and the member countries of the aforementioned European and international accreditation institutions, as well as issuance of permits for the import of products and other biological materials of animal origin into Ukraine, etc.

We emphasize that the corresponding work on the indicated directions is being carried out since the end of the 1990s and, therefore, approximately the beginning of the 2020s will be necessary grounds for the recognition of the equivalent domestic technical regulation system with the model of technical regulation introduced in the EU member states. This will be an objective basis for the unhindered promotion of products of the domestic agrarian sector to European food markets. We emphasize products that meet the regulatory requirements introduced in the EU for similar products.

With regard to the introduction of market surveillance, it is associated with positive changes in the field of entrepreneurship and the introduction of fair competition, the impossibility of putting into circulation of dangerous and poor-quality products, and thus ensuring the protection of life and health of humans, animals, plants and the environment, the observance of consumer rights for safe and high-quality food. The basic norms and principles of market surveillance in the member states of the European Union are set out in various legislative acts. In particular, in the Directive 2001/95 / EC of the European Parliament and of the Council "On general product safety" (dated 03.12.2001), a number of basic provisions have laid down not only the foundations, but also guidelines for the introduction of market surveillance (preamble of the directive: 6; 19; 23; 25; 39). At the same time, the same Directive provides for the introduction of a number of responsibilities for the Member States in order to ensure the effective functioning of state market surveillance (Article 2, paragraph 1, Article 2, paragraph 2, item 7), in particular:

- Member States should ensure that manufacturers and distributors fulfill their responsibilities for the safety of products placed on the market;
- Member States shall establish or designate bodies which carry out continuous monitoring of the obligation to supply only safe products to the market and provide such authorities with the necessary powers to take the measures required by this Directive;
- Member States should lay down rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and to take all measures necessary to ensure that they are implemented; Penalties must be effective, proportionate and dissuasive.

Almost all EU member states usually have at least four specialized market surveillance authorities. In particular, they deal with food products, medical products, industrial products and work / safety related issues. Within the food sector there are certain exceptions. For example, food products used in catering services are usually not within the competence of market surveillance authorities.

In line with EU practice, the Community does not legislate for member states to address safety issues. There are various Directives that apply to certain product groups: for example, food products, toys, chemicals, cosmetics. In addition, there is Directive 2001/95 / EC on general product safety, which applies to all types of goods and therefore relates to safety requirements, regardless of whether there is a separate Directive for this type of product.

The European Union is working through the Directives, which, if approved by all members, should be implemented in the legislation of each Member State of the Community. The Directive is adopted by the Council of Ministers (I e, representatives of the governments of member countries) [5, p. 9 - 10].

The European Union is the result of agreements between Member States on the joint implementation of certain actions identified in a series of formal agreements. The main and still the most important goal is to create a single common market in which businesses can trade wherever they need it, and where consumers can buy goods wherever they are, without difficulty and complications created by different national laws and market Cultures. The goal of the single market is to promote competition, and thus to improve business efficiency and achieve economic growth.

Compliance with all Directives (known as "EU rules" - in the original *acquis*, from the French word, which means "accumulated experience") is a requirement for countries wishing to enter the Community. The benefits to consumers should have been ensured by the efficient operation of the

market, and consumer issues should be considered in connection with the development of the single market. Thus, consumer issues were seen as part of changes in contractual legislation, transport policy, competition, food safety standards and safety, etc. [6].

From the mid-1970s, the situation continued to change gradually, but only with the adoption of the Maastricht Treaty of 1993 it became possible to adopt Directives on consumer rights that were not directly related to market integration or harmonization. This led to the creation within the structure of the European Commission of a separate Directorate of Consumer Policy. Subsequently, the issue of health and food safety has also been included in its area of responsibility, and is now known as the European Union Directorate General for Health and Consumer Protection) - DG SANCO. The European Commission (EC) also manages hazard warning products, that is, when there is a problem in any country, other EU member states (as well as countries outside it) receive information quickly and, if necessary, can apply appropriate measures to its territory. The two most important warning systems are: RASFF (European Rapid Alert System for Food and Feed) - European Rapid Alert System for Food and Feed Pollution; RAPEX (Rapid Alert System for non-food products posing a serious risk) - Rapid alert system for non-food products posing a serious risk.

The EU consumer policy, as noted by foreign and domestic experts [6, p.7], is not an integral system of relations that would regulate all aspects of consumer protection. The EU Directive is a rather variegated structure that regulates certain areas in detail, but others remain unregulated. It should be emphasized that individual EU member states are still responsible for the integrity of their own consumer policy and consumer rights. The EU Directives contain minimum standard features in selected areas, especially those affecting the domestic market. EU Member States have the right to exceed the standards provided for in consumer protection directives, provided that their norms do not restrict the free movement of goods and services within the internal market. As a consequence of the foregoing, EU Member States have created consumer protection systems that vary widely. In some cases, these differences hindered the functioning of the internal market. For example, there are significant differences between the law governing the business activities of enterprises aimed at the end user in the domestic market, caused by national specifics, and differences in general principles or different legal practices. In general, the regulation of the consumer sector in the European Union can be divided into two general categories:

- horizontal directives: General Product Safety Directive 2001/95 / EC; Directive 97/55 / EC on misleading advertising, as amended by the Comparative Advertising Directive 84/450 / EEC; Indicative Directive 1998/6 / EC; Directive on unfair terms in consumer contracts 93/13 / EEC; Consumer Product and Associated Guarantee Directive 99/44 / EC;

- sectoral (or vertical) directives: Food Directive 2000/13 / EC; The Cosmetics Directive 76/768 / EEC; Directive on the designation of textile products 96/74 / EC; Directive on medicinal products for human use 2001/83 / EC; Directive 90/314 / EEC on package tours; Directive on the protection of consumers in the field of outsourcing 85/577 / EEC; Consumer Credit Directive 87/102 / EEC; Directive on distance contracts 97/7 / EC; Measuring Instruments Directive 2004/22 / EC; Directive on the acquisition of the right to use immovable property for a certain period of time 94/47 / EC.

In the context of guaranteeing the systemic protection of consumer rights, the principles of market surveillance were formulated. Enforcement of the legislation of the European Union is the responsibility of the Member States of the Community: Article 10 of the EU-Treaty requires the Member States to take all necessary measures to ensure the fulfillment of their obligations under this Agreement. Market surveillance is an important tool for ensuring the implementation of the New Approach Directives, in particular through measures to verify compliance of products with current directives, the use of measures to bring inappropriate products into compliance, and the application of sanctions where appropriate. In addition to the implicit (hidden) obligations contained in the Agreement, Community legislation contains explicit requirements for the conduct of market surveillance activities by EU Member States. The principle of prioritization of the lower level of decision-making is applied, so the Member States of the Community should independently determine the administrative structures that will be used to fulfill their obligations in this area.

The implementation of market surveillance is the responsibility of public authorities [7, p.12]. In particular, this ensures the impartiality of market surveillance activities. Each EU member state can

independently decide on a market surveillance infrastructure; For example, there are no restrictions on the division of responsibilities between authorities on a functional or geographical basis, provided that supervision is carried out effectively and covers the entire territory. As a result, the legal and administrative infrastructures of market surveillance in different Member States differ from one another. This requires, in particular, effective administrative cooperation between the competent national authorities to ensure an adequate level of protection throughout the European Union, despite the fact that the competences of market surveillance bodies are limited to the territory of a single Member State of the Community. Market surveillance authorities should have the necessary resources and authority to carry out their supervisory activities, in particular to monitor the withdrawal of products on the market and, in the event of their non-compliance with applicable requirements, to take the necessary measures to ensure compliance.

At the same time, supervisors should be independent and exercise their activities impartially and without discrimination [7, p.12-13]. In addition, supervisors should conduct market surveillance activities, taking into account the principle of proportionality, i.e., actions must be comparable with the degree of risk or inconsistency, and the restrictions on the free distribution of goods can not exceed what is necessary to achieve the goal of market surveillance. Supervisors may engage third-party service providers to perform certain technical tasks (such as testing or verification), provided that they remain responsible for their decisions and that this will not cause conflicts of interest between the activities of assessing compliance with this organization and its tasks. By resorting to such measures, supervisors should monitor very closely the provision of the indisputable impartiality of the consultations received. The responsibility for any decisions that will be taken on the basis of such consultations will be borne by the supervisor. As a rule, the responsibility for market surveillance is unacceptable for the competent authorities. In order to prevent conflicts of interest, it is necessary to provide a clear distinction between two consecutive but fundamentally different stages of product control: the conformity assessment (preceding the withdrawal of products to the market) and market surveillance (which is carried out after the product is put on the market).

All of the foregoing points to the extremely high level of attention paid to the organization and implementation of public food market surveillance in the Member States as a last resort in protecting the interests of consumers of food products. Since Ukraine is actively pursuing European integration, it is important to analyze the real progress made in terms of moving towards a European model of market surveillance, achievements and shortcomings on this path. And, in our opinion, it is appropriate to take the adoption of the relevant resolution of the Government of Ukraine [8] in September 2014 for a reference point. One of its important results was the creation of the State Service of Ukraine for Food Safety and Consumer Protection [9]. This process was formally delayed by the end of April 2016 [10] (that is, about 20 months), but it took even more time for active inclusion in the fulfillment of the functions and powers assigned to the State Committee for Consumer Safety (hereinafter - the Services). The entry of the Service in the legal framework and the effective performance of the functions of state market supervision will depend to a large extent on the operational resolution of the issues outlined in the Comprehensive Strategy 2020 [11], in particular:

- further expansion of the legislative and regulatory framework, in particular, the introduction of the draft law for the State Committee for Civil Proceedings and Consumer Protection, as well as a number of subordinate regulations;

- Completion of the formation and strengthening of the network of territorial bodies of the Service with the relevant material support, filling vacancies by highly qualified specialists with knowledge of English;

- Completion of the formation and optimization of the territorial network of accredited OVS, providing them with modern laboratory equipment, qualified personnel with knowledge of modern methods of conducting researches (tests) of selected samples of products and professional knowledge of the English language;

- Completion of the HACCP implementation at large and medium-sized enterprises, as well as bringing the small capacities of the food industry into line with the minimum requirements of the basic programs (programs-prerequisites);

- Deployment of works on the audit of business entities in primary production (agriculture, forestry, fisheries) for compliance with the minimum requirements of the basic programs, development of its results and implementation of a set of works to eliminate identified discrepancies and measures for the training of technology personnel for the professional fulfillment of program requirements -prerequisites and other permanent safety procedures;

- the period of time necessary for the full and complete "entry" of the Service into the business environment with a view to actively influencing the food safety situation and gaining a positive image among the national market surveillance systems of the Member States of the Community and those countries that recognize the safety system Food and animal feeds introduced in the EU, etc.

For a long period of time, the stumbling block was the absence in the Law of Ukraine "On State Market Inspection and Control of Non-Food Products" (from 02.12.2010 № 2735-VI) of the provisions relating to the control of the safety of food products. In this regard, a draft law on state control was carried out in order to verify compliance with legislation on the safety and quality of food and feed, health and welfare of animals. It was developed with the participation of experts from the European Union and harmonized with the basic European legislation in this area, in particular: EU Regulations № 854/2004, № 882/2004, №669 / 2009, Directive of the Council of the EU № 97/78 of the EU. In the first reading, the Supreme Rada of Ukraine adopted the bill dated 22.07.2014, in the second, repeated after revision, taking into account the comments made, reading - 18.05.2017, and for signature it was sent to the President of Ukraine on 05/26/2017. The new wording of the Law The following: "On state control over observance of the legislation on food products, feed, animal by-products, animal health and welfare" (from January 18, 2017, No. 906) [12]. Within fifteen days after receiving the law, the President of Ukraine signs, accepts it and officially promulgates it, or returns the law together with his motivated and formulated proposals to the Supreme Rada of Ukraine for re-examination. The probability of signing is high.

Consequently, there are sufficient grounds for assessing the state of market surveillance through the main provisions of the law. At the same time, since the new system of state market supervision has been around for a whole year now, they require an objective assessment of changes that have already occurred and occur in the structure, functions and powers of the territorial bodies of the Service, taking into account the requirements of the framework law of Ukraine on food safety [13]. Therefore, it is appropriate to quote the words of the Chairman of the State Committee for Consumer Goods and Consumer Protection, in particular: the adoption of the bill number 0906 will allow the introduction of an effective control system and anticipate instruments that minimize corruption. "On the one hand, it allows to effectively perform functions of state control: for example, when there is a risk to the life and health of citizens, verification of economic entities will be carried out without warning. On the other hand, its adoption provides additional opportunities for ensuring business rights, eliminating corruption risks, in particular, by conducting video-fixing procedures for inspections not only by inspectors of the State Committee for Consumer Goods, but also by business entities, "added Volodymyr Lap [14].

It is worth to emphasize that the establishment of the Service is now under way as:

- the central executive body (CEB), which forms and ensures implementation of the state policy in the field of safety and separate indicators of food quality;

- CEB, which implements state policy in the field of safety and separate indicators of food quality (competent authority);

- the CEB, which establishes direct contacts with the countries to which the food products of domestic production will be exported, and specialized international organizations;

- the body which forms material, financial, human resources, organizational, managerial, informational and other support for the purpose of effective activity of its territorial divisions;

- the body that optimizes the territorial network of departments, laboratories and other structures, as well as separates the assigned functions between public and private structures, which will be performed within the framework of the established competence;

- a body that organizes and carries out state control, including on agro-food markets and on the border of Ukraine with regard to imported food products;

- the body that exercises state control over the implementation of permanent safety procedures based on the principles of the system of analysis of hazardous factors and control at critical points (HACCP system);

- the body that organized and conducted within the framework of the EU Project "Improvement of the Food Safety Control System in Ukraine" training on compliance with European requirements 500 Ukrainian veterinarians and other specialists (63.6% of them received the HACCP auditor's certificate), in order to implement Ukraine has a risk-oriented system of official control, which has been successfully operating for almost ten years in the member states of the Community, etc

According to the UAE last year, Ukraine has undertaken to provide an equivalent European level of state control over market operators. In this regard, the main auditors of the objective assessment of their compliance with market operators are put forward in the foreground, in particular: authorized persons (natural and legal persons authorized by the competent authority), state inspectors, state veterinary inspectors. State control in the field of food safety is carried out in order to verify the compliance of the market operators, on the one hand, with the implementation (implementation) of sanitary and / or phyto sanitary and / or veterinary and sanitary measures, and, on the other hand, compliance with the requirements of legislation on food products Animal origin, animal fodder, animal by-products, hay, straw, animal health and welfare. The market operators include: food market operator, primary market operator, feed market operator, food service operator, market operator for the handling of by-products of animal origin (for the purposes of Section VII of Law No. 0906).

To date, there is a significant gap in the implementation of ongoing safety procedures between enterprises in the agrarian sector of the economy, which have been engaged in foreign trade activities (mainly large exporters of food products) that have been operating in the domestic market for a number of years and have not yet begun. In order to overcome it, the Ministry of Agrarian Policy and Food (IAAP) conducted a series of seminars in the regions on the topic: "New Food Legislation. Official control of market operators. Rights and obligations of the competent authority and market operators. Practical Aspects ". They said that it was carried out within the framework of the EU Project "Improvement of the Food Safety Control System in Ukraine". Over the past two years, such seminars have become familiar with the new legislation and have been trained by over one and a half thousand representatives of medium and small businesses in the food industry.

Considering that the production of food products originates from the cultivation of raw materials of plant and animal origin, it is advisable to systematize the regulatory framework for food safety. The hierarchy and structure of regulatory documents governing the fundamental issues of food safety, both in retrospect and in accordance with their legal status, can be presented in tabular form. Listed in the table 1 the list of basic normative documents (not exhaustive) is periodically reviewed and necessary changes are made to them.

Table 1. The structure of normative documents of the European Union and Ukraine that regulate the safety of food products and animal feed *

№	EU regulatory documents	Name of regulatory documents of the EU and Ukraine
1	2	3
1	Directive 2002/99 / EC	On the establishment of sanitary rules for the regulation of production, transformation, distribution and importation of animal products intended for human consumption;
2	Regulation No. 178/2002 / EC	On the establishment of general principles and requirements of food law, the creation of a European Food Safety Authority and the establishment of procedures in matters related to food safety;
3	Regulation No. 852/2004 / EC	Concerning food hygiene;
4	Regulation No. 853/2004 / EC	On the establishment of special hygiene rules to be applied to food products of animal origin;
5	Regulation No. 854/2004 / EC	On the departmental control of certain products of animal

		origin intended for human consumption;
6	Regulation No. 882/2004 / EC	About official control measures to ensure compliance with fodder and food law, health and animal protection regulations;
7	Decision No. 1691/2004 / EC	The sanitary and veterinary-certification conditions necessary for the importation into the Community of milk which has undergone heat treatment, milk products and raw milk intended for human consumption;
8	Regulation 396/2005 / EC	On the maximum allowable levels of pesticides in food and feed of plant and animal origin;
9	Regulation No. 2073/2005 / EC	On Microbiological Criteria for Food Products
10	Regulation No. 1881/2006 / EC	On establishing maximum levels of certain pollutants in food
11	Regulation No. 605/2010 / EC	On the establishment of veterinary and sanitary conditions, as well as the conditions for veterinary certification for the import into the European Union of raw milk and dairy products intended for human consumption
12	International standard of ISO series 9000	A series of international standards that systematize the requirements for quality management systems of organizations and enterprises (the latest Ukrainian version of DSTU ISO 9004: 2012 - Management to achieve a sustainable success of the organization - Approach from the standpoint of quality management);
13	International standard of ISO series 14000	Environmental management systems (DSTU ISO 14001-97 - Environmental safety management systems);
14	HACCP system	Analysis of hazardous factors and critical control points (Ukrainian version of DSTU 4161-2003 - Food safety management systems - Requirements);
15	International standard ISO 22000: 2005	Food safety management systems. Requirements for any food chain organization (Ukrainian version of DSTU ISO 22000: 2007);
16	International standard ISO 22005: 2007	Traceability in feed and food chains - General principles and basic requirements for the development and implementation of the system;
17	GMP + FSA module	Ensuring the safety of feed at all stages of production and supply of feed (the consumer is guaranteed the confidence that feed products are produced, processed, sold, stored and transported in accordance with established requirements). Initiated and developed in 1992. The module is universal and has received international recognition, combines the principles of HACCP and the quality system ISO 9001, the certification of enterprises is possible by 13 standards;
18	GMP + FRA module	Ensuring feed responsibility (consequences of their (ie, producers) actions, in particular regarding the use of soy and soya products and fish meal, for the population, animals and the environment in addition to profits);
19	Private standard	Developed by the British Retail Consortium for Food Safety and Quality [15, p. 129-130];
20	BRC Food Safety Standard	Developed by the German company QS Quality and Safety [27, p. 125];
21	Private Q & S standard	A specialized standard for special fodder ingredients and their mixtures is used as an instruction manual for the introduction of a feed safety management system. Developed by representatives of the feed industry in 2004. Acquired official recognition by the European Commission [15, p. 127 - 128];
22	Private standard FAMI-QS	The system of 16 standards was developed by EUREPGAP and intended for certification of plant, livestock, horticulture and aquaculture. Revised every four years. It covers the following areas: food safety and traceability; Environmental protection, taking into account biodiversity; Health care, safety and welfare of farm workers; Welfare of animals; Integrated crop management, integrated plant protection, quality management system and risk analysis and critical point control system, and extends to additional aspects of production, such as supply chains and fodder production [15, p. 122-124];

23	Private standard GLOBALG.A.P.	Programs of mandatory preliminary food security measures (Preconditions for food safety) - Part 1: Production of food products;
24	International Standard / Specifications ISO / TS 22002-1: 2009	Programs of obligatory preliminary measures for ensuring (Preconditions for food safety) - Part 3. Production of agricultural products;
25	International Standard / Specifications ISO / TS 22002-3: 2011	Programs of mandatory preliminary food security measures (Preconditions for food safety) - Part 4: Production of packaging for food products;
26	International Standard / Specifications ISO / TS 22002-4: 2013	Preventive Necessary Prevention Programs (Preconditions for Food Safety) - Part 5: Transportation and Storage.

* Source: [Compiled and systematized by D.F. Krysanov; Practical guide for an agrarian exporter to the EU. Issue 1 - Kyiv-Berlin: Ukraine's Counseling on Agrarian Trade - within the framework of the Comprehensive Free Trade Agreement (FTA) between the EU and Ukraine, 2016 - 140 pp.]

At the same time, it is necessary to mention another departmental document prepared by MAPP. "REQUIREMENTS" [16] are based on the principles of HACCP, but there are some very important explanations and remarks, namely:

- they are mandatory, but apply only to operators of the market for the production and / or circulation of food products, i e, attention is focused only on processing capacity [16, p. 1.7];

- the range of used normative documents (HACCP, prerequisites, codes of good practice) is expanding considerably, as well as a significant increase in the set of tools for ensuring compliance with safety requirements, in particular: implementation of HACCP; Implementation of the minimum requirements of the programs-prerequisites; Development and introduction of proper (industrial, agricultural, agricultural, sanitary, veterinary) practices for a particular type of market operators; Introduction of flexible or simplified procedures based on HACCP principles, taking into account the level of product safety;

- the requirements of European legislation on primary production (rural, forestry, fisheries) are significantly different: vegetable products are much simpler than those related to products of animal origin or processing and food production. However, the lack of direct guidance on the implementation of systemic methods of safety by farms of primary production, as well as their differentiation depending on the level of safety of a specific type of food raw material can be regarded as a real omission of these "REQUIREMENTS" and therefore requires more thorough study of this issue.

At the same time, domestic experts note that for practical implementation of the main provisions of the Law No. 0906 it is necessary to adopt approximately 80 legislative and subordinate acts annually for the next few years. By-law includes decrees and orders of the Cabinet of Ministers of Ukraine, orders of various CEBs (MAPP, Ministry of Health, State Committee for Consumer Safety), and other normative documents to be developed and agreed upon with the said law. Regarding a new wave of laws, the projects are already being developed and the following are being examined: On the safety and hygiene of feed; Information about food information for consumers; On requirements for objects and materials in contact with food products; About using statements about health benefits; About the latest foods and more.

Unlike the Soviet and post-Soviet systems of technical regulation, which were based on the postulate of unconditional government control following the requirements of Soviet and ex-Soviet standards, the European model of technical regulation places responsibility on the issue of safe and quality food products on its producer. It is about introducing a preventive approach to controlling food safety instead of dealing with the consequences of violations of regulatory requirements. Control takes place throughout the food chain, but within the responsibility of a particular market operator at the stage of the technological process. This allows to identify the threat of violations of requirements in the early stages, and thus prevent the dangerous product from entering the consumer. This requirement is implemented in the form of mandatory introduction of the Food Safety Management System on the principles of HACCP [13, II. Final and transitional provisions of clause 1.1]. In particular, in all establishments producing food products containing unprocessed ingredients of animal origin, HACCP (with the exception of small capacities) should be implemented by September 20, 2017. For the remaining enterprises (with the exception of small capacities) - until 20.09.2018 On small capacities -

until 20.09.2019 At the same time, a number of exceptions are envisaged, the possibility of introducing simplified procedures on the principles of HACCP (trade and confectionery enterprises, mini-bakery, public catering establishments).

Small capacities are grouped by the following parameters:

- The capacity of the food supply to the final consumer has no more than ten staff members (i.e., excluding managers and accountants), covering an area of no more than 400 square meters. M
- Capacities that do not supply food to the end consumer and have no more than five employees.

The remaining small enterprises, with the exception of the Group III small capacity groups, should be included in Groups I and II according to product specialization (products of animal or other origin) and are fully covered by relevant legislation.

There are no statistics on small capacities in Ukraine, but 5502 units of the total number of enterprises. [17, p. 109] small among them:

- with a number of 10-49 employees - 1218 enterprises;
- with a number of employed up to 10 people - 3268 micro enterprises.

Consequently, the estimated total number of business entities in groups I and II (without small capacities) is respectively 750 and 1500 (a total of 2250) producers. According to the latest data, 1340 different management systems have been certified in the food industry, while 338 systems are still under development and implementation at 979 (410 + 569) enterprises. Thus, the coefficient of implementation of various functional safety systems in Group I is 55%, in II - 38% (in both groups - 43.5%). This allows us to make a logical conclusion that either there is a significant lag in the implementation of HACCP in the first group or the statistics do not generate trust. The indicators we calculated are estimated - they are obtained on the basis of comparison of official statistics with the data of regional departments of agro-industrial development, based on the results of conducted by the industry associations monitoring the implementation of HACCP.

With regard to low capacity, manufacturers should determine themselves, depending on the level of safety of a particular type of food raw material, which of the ongoing safety procedures will need to be implemented. The following technical specifications (ISO / TS 22002-1: 2009 and ISO / TS 22002-3: 2011) describe the minimum requirements for the establishment, implementation and maintenance of basic programs (BPs) aimed at helping to manage hazardous food safety factors. It is assumed that the implementation of its provisions should be made by skilled and experienced personnel who can competently implement the requirements of these specifications.

To this end, owners of small capacities should independently carry out an internal audit on compliance with the minimum requirements of the basic programs (ISO / TS 22002-1: 2009 Program of mandatory preliminary measures for the safety of food products - Part 1: Production of food products) and, according to its results, ensure Eliminate detected nonconformities and introduce permanent safety procedures. In the future, they can acquire the "right of citizenship" after an audit by the specialists of the Service and confirm the compliance of the facilities with the minimum requirements of the pre-program requirements by the signed by them act of the established form. In this regard, the MAPP must prepare a draft order "On Approval of the form of an act compiled on the basis of the results of the state audit on the compliance of market operators with the requirements of the legislation regarding permanent procedures based on the principles of a system of analysis of hazardous factors and control at critical points" and to give effect to it. In accordance with the requirements of the legislation.

The State Procurement Administration, in accordance with the orders of the MAPP of Ukraine (dated February 10, 2016, No. 38, No. 39, No. 40), serves as the state registrar and is responsible for the maintenance of state registers, in particular:

- State Register of Capacities of Market Operators (Order No. 39) - 152672 units registered. (As of May 26, 2017);
- the register of approved export capacities (food products) (№ 38) - 715 units registered. (As of May 3, 2017);
- the register of market operators and capacity of food products for which the operating license was issued (No. 40), - 1033 units registered. (As of May 19, 2017).

It should be noted that operating permission is given to market operators and capacity who carry out activities related to the production and / or storage of food products of animal origin. The aforementioned also include the power that is a vehicle or other movable property (refrigerator, fishing and freezing vessel, moving power for the collection of food raw materials, etc.).

Thus, the work on registration of market operators and food products has become much more active, which will allow, upon the set date, to get a more complete picture of the implementation of one of the important provisions of the framework law of Ukraine on food safety [13].

Initial manufacturers are not required to implement HACCP, but the Law [13, art. 40] establishes general requirements for market operators of primary products, compliance with which will contribute to the safety of food products. This concerns the observance of the sanitary and hygienic conditions of production and the necessary measures to manage the hazards and prevent their impact on public health and the environment. In this regard, it would be advisable to distinguish between two groups of primary producers as a result of differences between requirements to them [17, p. 95], namely:

- 1) producers of products of animal origin: a) animal husbandry - 2426 farms; B) mixed agriculture - 1028 farms; C) fish farming - 881 farms;

- 2) producers of products of plant origin: a) cultivation of annual and biennial crops - 38856 farms; B) cultivation of perennial crops - 1121 farms; C) reproduction of plants - 159 farms.

The preparedness of the producers to supply safe primary products to the processing capacity can be established by self-auditing to meet their own production requirements to the minimum requirements of the basic programs (ISO / TS 22002-3: 2011 Program of mandatory preliminary measures for the safety of food products. Part 3. Production of agricultural products). According to its results, a substantiated conclusion regarding the compliance of the operators of the primary product market with the minimum requirements of the program prerequisites may be made, in particular: a) they fully respond; B) Operational intervention is necessary to solve simple problems and eliminate imbalances; C) requires significant improvement of production, sanitary and sanitary-veterinary conditions; D) it is advisable to direct products to meet the own needs of those producers who do not adhere to the minimum requirements of the programs-prerequisites [18, p. 348-339].

Inadequacy of the minimum requirements is eliminated by developing and implementing a complex of measures and the introduction of permanent procedures in order to ensure compliance with the specifics of the specific production. Upon completion of the elimination of inconsistencies, the farm invites the specialists of the State Committee for Consumer Goods and Consumer Protection. After the inspection, an act is signed on the compliance of the operators of the primary production market with the requirements of the basic programs and the introduction of permanent safety procedures based on the principles of the system of analysis of hazardous factors and control at critical points. This is a legal confirmation of the compliance of the production of a particular farm with the minimum requirements of the program of preconditions and the guarantee of the cultivation of safe raw materials.

According to UA [1, Chapter 4], Ukraine is obliged to eliminate all sanitary and phyto sanitary barriers in trade with the European Union. Previously, it concerned the harmonization of domestic standards with European ones, then the development of technical regulations, and now the implementation of the European model of food safety was under way, as well as the implementation of sanitary and phyto sanitary measures (SPS) in accordance with European requirements. In order to accelerate the implementation of the SPS, the Cabinet of Ministers of Ukraine approved an all-embracing "Strategy" [19]. The strategy covers three components and includes about 270 events, including: 1) Public health - almost 80; 2) Animal health - about 100; 3) Phyto sanitary measures - more than 90 measures. Implementation of the measures included in the Strategy (requirements of directives, regulations, decisions, recommendations of legislative bodies of the EU) in the normative-legal field of Ukraine is carried out during 2016-2020. This field includes: laws of Ukraine, technical regulations, harmonized standards (which are given functions of technical regulations) Instructions and recommendations. The implementation of the measures will ensure the formation of a domestic normative field in the field of food law equivalent to the European, which will promote significant

progress towards the integration of the agrarian sector of Ukraine into the internal market of the Community member states.

It should be noted that in 2016, 277 enterprises in the management of the MAPP of Ukraine were entitled to export their products to the markets of the European Union [20]. Among them, 180 enterprises producing non-animal products, and 97 - food products of animal origin, of which: 7 - producers of poultry meat and products thereof, 19 - fish and fish products, 2 - eggs and egg products, 49 - honey of bees, 5 - frog legs and snails, collagen - 1, intestinal raw materials - 1. In 2016, the club of Ukrainian food exporters has replenished 51 new members, 18 of them - produce products of animal origin. In addition to Community Member States, food products are actively moving to food markets in Asia, Africa and even America. Consequently, the circle of domestic food producers, which meets the requirements of the normative documents in force in the European Union, is becoming wider.

Conclusions

1. The signing of the Association Agreement with the European Union provoked new challenges and intensified the aggravated aging problems in the Ukrainian agrarian sector; At the same time, it served as a catalyst for the emergence of new opportunities, tools and mechanisms for their solution. The transition to a European model of food safety has necessitated not only the modernization of the domestic food and feed safety system and the veterinary service, but also the introduction of sanitary and phyto sanitary measures in the agrarian sector in accordance with the requirements of the EU. One of these efforts should be optimization, development and active "development" of the assigned functions and powers granted by the territorial network of departments, institutions and organizations of the State Service of Ukraine for Food Safety and Consumer Protection. Creating its own market surveillance system, equivalent to a European model of market surveillance, will allow for a significant progress towards the integration of the Ukrainian agrarian sector into the internal market of the Community.

2. One of the most problematic solutions to the agrarian sector is the requirement to guarantee the production of safe food based on the introduction of systemic safety methods. The analysis showed that the implementation of HACCP in the 1st and 2nd groups of food industry enterprises is less than half (including in Group I does not exceed 55%). Therefore, it is necessary to intensify efforts to correct a rather critical situation and the important role here should play the State Committee for Consumer Safety. Its territorial divisions should initially raise the issue of auditing in enterprises where there are few effective security systems (there is a formal implementation of HACCP and other functional systems) or they do not exist at all in order to motivate their owners to practice the situation and monitor the implementation of specific Measures according to the established schedule.

3. According to the current legislation, for the introduction of permanent operating procedures at small capacities there are more than two years. At the same time, there is no provision for HACCP implementation in farms of the initial production, but general rules on compliance with production, sanitary and sanitary-veterinary requirements, which are also applicable to primary market operators, are established. In order to assess the preparedness of production of these market operators, it is expedient for their owners to independently carry out an audit on compliance with requirements that ensure the safety of the production of food raw materials and food products. In case of non-compliance, a complex of necessary measures to eliminate inconsistencies is implemented, and the specialists of the State Committee for Proprietary Services will evaluate the preparedness of the production for the implementation of the ongoing safety procedures and their implementation.

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Received: 30.05.2017

Reviewed: 19.06.2017

Accepted to publishing: 23.06.2017

METHODICAL APPROACHES TO ASSESSMENT OF EFFICIENCY OF INVESTMENT PROJECTS OF DEVELOPMENT OF RURAL TERRITORIES

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Abstract: *The purpose is to justify the principles of assessing the effectiveness of innovation and investment projects of rural areas development on the basis of sustainability.*

Research methodology. In the course of the research general scientific and special methods for solving the tasks and obtaining the corresponding results were used, in particular: the method of logical analysis - in determining the factors of influence on the efficiency of investment projects; Systematization and generalization - in the synthesis of modern methodological approaches to the evaluation of innovation and investment projects of rural areas development; Abstract-logical - for theoretical generalizations and formulation of the findings of the study.

Results. The principles of estimation of efficiency of innovative-investment projects are generalized. The interrelation and interdependence of goals and tasks in the development of three subsystems of sustainability have been studied, which need to be taken into account when identifying the effects arising from the implementation of investment projects. The methodological principles of evaluation of innovation-investment projects of rural areas development in conditions of observance of the requirements of sustainable development are highlighted. The deterrent factors hindering the implementation of the processes of investment of investment resources in the development of rural areas are determined. The principles of implementation of investment projects oriented on sustainable development are substantiated. Priority directions of investing resources investment in the development of rural areas on the principles of sustainability within the framework of solving economic, social and environmental problems have been identified. The mechanism of estimation of efficiency of innovative-investment project of development of rural territory in the conditions of limited financial resources is offered.

It is substantiated that it is expedient to calculate the efficiency of investments taking into account the effects that are determined in the economic, social and economic subsystems of the rural territory on the basis of the use of cost and natural indicators, as well as the integral indicator, which in dynamics will be able to characterize the achieved effect of investment activity. The necessity of using integral ecological norms in the assessment of investment projects of rural development developed on the basis of the energy approach is proved. It is determined that the quantitative criterion of the degree of balance of natural and productive potentials is an indicator of the ecological technical capacity of the territory, which can be expressed by the mass of the substance standardized according to danger (toxicity) and presented in energy or money terms.

Scientific novelty. The mechanism of estimation of efficiency of innovative-investment project of development of rural territory is substantiated.

Practical significance. Adherence to the above-mentioned principles in assessing the effectiveness of rural development investments will take into account specific features, including the potential and problems of rural areas; To formulate a strategy and priorities for the development of rural areas; Define a circle of investors and coordinate their interests with the interests of the territory; To substantiate the mechanisms of interaction and coordination between the subjects of the system; Optimize the investment process. Using the indicator of environmental technology in the evaluation of investment projects will allow forecasting further development of investment projects and develop measures to prevent degradation of the environment during their implementation. The proposed mechanism for evaluating investment projects for rural development will form the basis for the correlation of the impact of planned activities and the possibilities of the natural complex to self-reproduction without the occurrence of irreversible changes in the ecosystem. This will allow to regulate activity on realization of investment projects and to build a system of acceptance of investment decisions on the basis of principles of sustainable development.

Key words: *innovation and investment project, efficiency of investment projects, sustainable development of rural territories.*

JEL Classification: O16, O30, O38, R11, R51

Statement of the problem. Modern geopolitics trends indicate the importance of fundamental research, theoretical and methodological approaches to the formation of complex strategy of development of rural territories of Ukraine that will prevent their degradation and contribute to development in the gardens of permanence. Systemic analysis of dynamics of the integral index of economic security of Ukraine, evolution of existing laws and normative-legal documentation concerning the development strategy of the country, indicates that the present time is a point of bifurcation in the formation of theoretical and methodological tools necessary for stimulating rural development.

Rural areas are an important factor of economic growth of the country as a whole and its regions. Typical modern state of the rural areas are: high unemployment, low quality and accessibility of social services, lack of improvement, and economic problems that manifest in the lack of opportunities for the development of areas as economic systems, namely: aging, lack of innovation of material-technical base and production capacity, an underdeveloped industrial infrastructure, insufficient level of diversification of the economy. It is obvious that the sustainability of rural areas can be achieved on the basis of activation of investment activity and its targeted development, components of the system of management of investment processes, where in addition to incentive measures and optimize investment resources important are the issues concerning the principles of estimation of efficiency of innovative-investment projects.

Analysis of recent researches and publications. A significant contribution to the development of modern methods of assessment of efficiency of investment projects made by foreign scientists: V. Behrens V. Bocharov, G. Birman, P. Vilensky, Kovalev, V. Livshits Y. Melkumov, D., Northcott, S. Smolyak, and others. Questions of an estimation of efficiency of investment projects were the subject of research of Ukrainian economists: Leonid Bakayev, I. blank, J. Eleiko, A. Transplanted, Reverchuk S., V. Fedorenko, G. Tarasyuk and others. Despite a deep and informed research on investment issues, is necessary to the justification of principles and the formation of a comprehensive system of assessment of efficiency of innovative-investment projects development of rural areas.

Statement of the problem. The aim of the article is justification of principles of estimation of efficiency of innovative-investment projects development of rural areas on the principles of consistency.

The main material of the study. As it is known, the evaluation of investment projects may vary in types of efficiency, recruitment and the reliability of the input data and the details of their descriptions, however, despite the significant differences between types of projects and the multiplicity of the conditions of their implementation, assessment of effectiveness of projects and their examination should be conducted on a uniform methodology based on sound principles. These requirements apply to the implementation of development projects in rural areas.

It is obvious that the fundamental approaches to assessment have much in common, but can have differences in ways of implementing the General principles depending on the main goal towards which they are focused. In the principles of evaluation we can distinguish the following types: methodological principles – the most General concepts regarding assessment of the effectiveness practically do not depend on its specificity; methodological principles that are directly linked to the project, its specificity, economic, and financial attractiveness; operating principles that contribute to the harmonization and prompt calculation of the main indicators of the effectiveness of the project.

Summarizing the scientific development of foreign and domestic scientists believe that in the assessment of innovative investment projects of development of rural territories in compliance with the requirements of sustainable development it is advisable as the methodological principles of calculation of efficiency use the following: evaluation of effectiveness carried out throughout the project life cycle; to consider the time factor and the most significant impact of the project in the aspect of economic, social and environmental development; the principle of positive net cash flow and the achievement of the maximum effect; comparability of conditions of comparison of different projects; considering the influence of uncertainty and risks that accompany the implementation of the project [1; 2].

If the above principles of evaluation of efficiency of innovative-investment projects (IP) sufficiently deeply studied by scientists, the principle of accounting for all of the most significant results of its implementation did not receive the necessary consideration. So, John. Keynes proved that investments bring a multiplier effect, that is, investments in one sector contribute to growth in other sectors of the economy [3]. Now has already formed the opinion that one of the fundamental principles of estimation of efficiency of investment projects is the need to address the implications of its realization in adjacent and related industries. In particular, the growth of such indicators as gross regional product, tax revenues and job creation in some works is to be calculated using a multiplier, which implies an important place of the multiplier took George. M Keynes, S. Fischer [4], P. Kahn [5] as well as its economic content is considered I. Ansoff [6]. Domestic economists also note on the account of the multiplier to estimate the impact of investments in a particular industry or sector. So, O. B. Slivinskaya offers a system of assessment of the effects of innovation and investment activity in grain production [7, p. 23]; V.F. Gamaliy, V.S Sotnikov with. the centurions suggested approach to the evaluation of investment attractiveness of regions via an integral index, which takes into account a multiplicative effect [8, p. 16]. G. V Deriy differentiated approaches to the assessment of the effects of investments in human capital formation at the enterprise level and a national scale [9, p. 19]. Therefore, the multiplier may be one of the performance criteria when making decisions on implementing innovation and investment projects in development of rural areas.

Now the countryside is seen as a complex natural-economic territorial system, whose development is mainly determined by the level of perfection of the internal integration of natural, economic, social, environment and governance [10, p. 40]. In our opinion, sustainable development of rural areas is a targeted comprehensive development, which is carried out by all subjects of management of the territory and is based on the efficient use of their capacity, based on the interests and needs of present and future needs of the population, and will promote the optimal combination of dynamic, stable and balanced functioning and harmonization of social, economic and environmental subsystems. In the implementation of innovation and investment projects to achieve sustainable rural development must take into account that the rural territory is complex socio-economic system, which consists of economic, ecological and social subsystems at the same time is a subsystem of a higher hierarchical level (part of the country, agglomeration, etc.). The constancy of rural areas depends on the balance between its internal subsystems (single elements) and stability of systems of a higher order that must be considered when evaluating the effectiveness of SP. Adherence to a systematic approach in assessing the effectiveness of the implementation of IP provides a comprehensive assessment of the impact of investments on social, environmental, industrial, economic and other of the economic system "rural area" and also allows you to aggregate a synergistic result, i.e., involves the direct consideration of all factors, and high accuracy rate increase income, employment and consumption relative to investment growth.

The main purpose of investment projects of development of rural territories on the principles of sustainability is a balanced combination of economic, environmental and social objectives, which could contribute to the rational use of land and other resources in agricultural production the maximum return of the invested resources, environmental, environmental conservation and social standards of "quality of life" in the village. We believe that in the assessment of investment projects of development of rural territories it is advisable in addition to the calculation of economic indicators to provide environmental and social expertise. As you know, the project appraisal is a procedure to establish compliance of the proposed activity in rural areas environmental requirements to prevent potential adverse effects of these activities on the environment and related social, economic and other consequences. In fact, examination is a tool of the state to preventive control in the environmental field.

Examination of investment projects of development of rural territories should be based on the following principles: first, the binding nature of its implementation; second, the complexity of evaluation of environmental impact and social development of rural communities; thirdly, the independence of experts for examination; fourth, publicity and the voices of members of rural communities; fifthly, the reliability and completeness of information on the impact of a project on the environment and social issues. The result of this examination is the expert conclusion, after which (in

case of positive conclusion), you can begin to implement design decisions concerning the strategic development of rural areas on the principles of consistency.

The combination of existing economic instruments to support the integration of sustainability principles into the field of realization of investment projects of development of rural territories, is shown in Fig. 1.

Note that one of the market tools for financing projects with consideration of sustainable development is "the principle of the equator". So, in June 2003, ten banks, accumulating approximately one third of all loans to global production, announced that they respect in their activities to certain principles of environmental and social nature. Later they were joined by 58 banks [11]. Adopting these principles, banks ensured that the projects they funded, comply with leading practice environmental management. The main factors that led to the decision of financial institutions were a financial loss, increased risk of pressure from the public, loss of reputation, etc. so, banks prefer to participate in projects with the appropriate level of environmental and social responsibility.

The sustainable development of rural areas and the achievement of strategic goals is possible only if the relevant interests of all stakeholders (rural communities, existing on-site production structures, regional authorities and the state in General) and responsible behavior on the part of rural communities to its stakeholders.

Note that the principles of sustainable development should be integrated into the basic process of functioning of rural territories, in particular in the project management process through a balanced improvement of economic and social efficiency, while reducing negative impacts on the environment. Activities that increase the sustainability of rural areas, implemented in the form of projects, whose role is to fill the gap between the target (strategic) and the actual level of sustainability of rural areas. In turn, investment projects became part of the strategic programs for the sustainable development of the region and form a portfolio of projects with rural communities. A set of projects with structural and organizational providing may be called by the project system of rural areas, the main management objective of which is to improve the level of sustainable development.

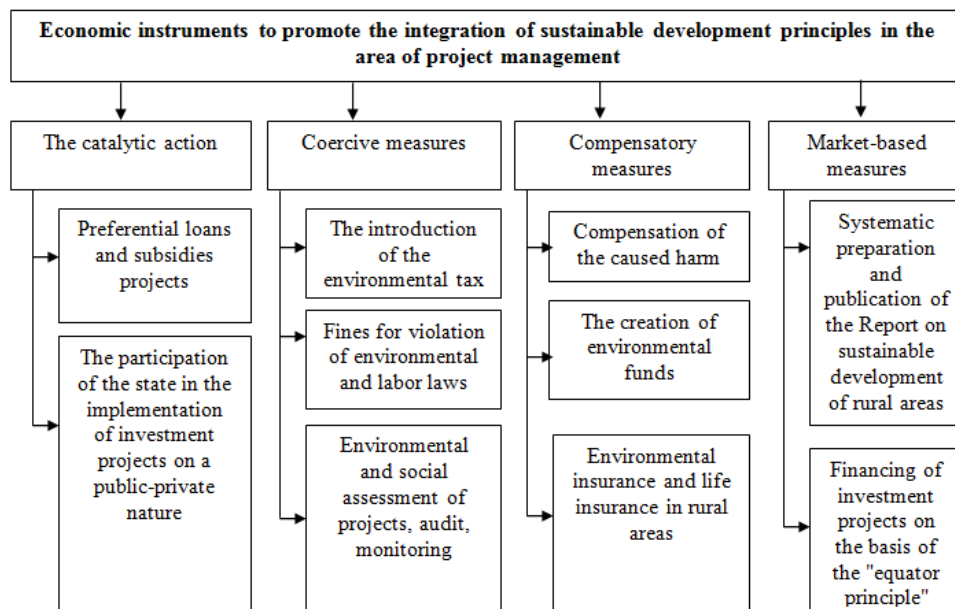


Fig. 1. Economic instruments integrate principles of sustainable development of rural areas in the project management system

Source: developed by the authors.

We believe that the effective implementation of investment projects in the rural communities can be developed by Robert Cooper's Stage-Gate process ("stage-gate"), provided that it focus on achieving the principles of sustainable development [12]. As you know, Sustainable Stage-Gate

Process provides for the separation of each project into phases (stages) with clearly defined results at the end of each of which a project must pass through a checkpoint (gate) is an official meeting with the participation of the investor, the customer of the project (in this case rural communities) to assess the situation and to take decisions concerning transition to the next stage. By the end of each stage, the project must meet targets, including in the field of sustainable development. In the second case, the meeting accepted the decision to stop the implementation of the project or return to the beginning of the respective stage.

It is important to determine what results must be achieved at each stage of the project. It is advisable to determine the list of parameters for sustainable development of rural areas for each checkpoint, and to consider alternative variants of project implementation and assess the optimality of the selected solution from the point of view of increasing stability. In addition, with each new stage it is advisable to develop the project implementation plan taking into account its impact on the environment and impact on society as a whole, as well as the list of risks to plan appropriate preventive measures.

Is the process "stage-gate" also proposed to add a stage of "external assessment of stakeholders", which provides for the release of the project management process beyond rural areas with involvement to the procedure of the assessment of different stakeholders (rural communities, representatives of state authorities, entrepreneurial structures functioning in rural areas, and the like) by conducting public hearings on environmental impact assessment of the investment project on the environment and the social sphere in rural areas. With this approach, the evaluation of the project on socio-ecological-economic aspects takes place as "inside" and "outside" that will balance the interests of rural areas and stallholders during the implementation of the investment project to mitigate social and environmental risks, enhance the sustainability of rural areas.

In order to get to the milestone first stage of the process described above a "stage-gate" (Sustainable Stage-Gate Process) all potential development projects in rural areas on the principles of consistency should match the scorecard. With the purpose of such selection we propose a methodology for quantitative comparison of projects against targets to enable monitoring and to carry out a synthesis assessment based on scoring models. Scoring is a model of integrated assessment (scoring) of projects on a set of criteria. Each new project based on the total score must be attributed to a particular group in terms of its sustainability. The main stages of the scoring of projects from the perspective of sustainability are: the creation of a list of criteria for the evaluation of the project on three groups of indicators: economic, environmental and social; determination of weight of importance criteria; setting target values of the criteria; assigning, based on expert evaluation of each criterion the appropriate number of points depending on its impact on bridging the gap between the actual and the target level of resilience; definition the total score of the project for all criteria with the weights with the help of economic and mathematical models.

So, for the purpose of development of rural territories, including the restoration of territories in crisis situations, overcoming the negative socio-ecological-economic trends, it is necessary to invest, forms and directions which shall conform to the requirements of sustainable development. Now the process of investing in the development of rural areas is constrained by the following factors: diversified agricultural enterprises are low-profit, unlike the highly specialized structures of holding type, focused mostly on crop production; the display of price disparity in agricultural production; the low attractiveness of rural areas for living (lack of social infrastructure, insufficient and inadequate housing stock, etc.); the lack of comprehensive and systematic policy of investing in the development of rural areas.

These factors hinder the implementation processes of the investment of resources in development of rural areas, however, the investment process on the principles of sustainability can be achieved in the following areas: economic development of the productive capacity of agricultural enterprises (modernization of existing and development of new industries, diversifying the economy, increasing competitiveness and agricultural producers, etc.); social direction – ensuring of normal conditions for the life of the population and jobs (development of engineering and social infrastructure, development of road network, construction of, capital repairs of housing Fund, etc.); ecological direction – for the restoration, maintenance and preservation of fertility of agricultural

lands, the protection and restoration of objects and elements of the natural environment, maintaining ecological balance. All these areas of investment are closely linked, and each of them implies the effect on the vector of development of others, and the priority of each of the areas in the processes of investment resources is determined by the specifics of the territory and the achieved level of balance development of economic, ecological and social subsystems. Thus, at the input of the system evaluation of the effectiveness of IP in the development of rural areas received information on the current and capital expenditures, the timing of the project, performers, performance criteria of the project, and the output – decision on project financing. Subject to the limitations of financial resources, management decisions about the choice of the priority directions of investing is a priority (Fig. 2).

Consequently, the economic system of "rural area" interacts with environmental factors: agribusiness, society, government, pursuing its own interests and goals and can be evaluated by certain standards (consumption of basic foodstuffs, the level of annual average income and structure of its distribution, etc.).

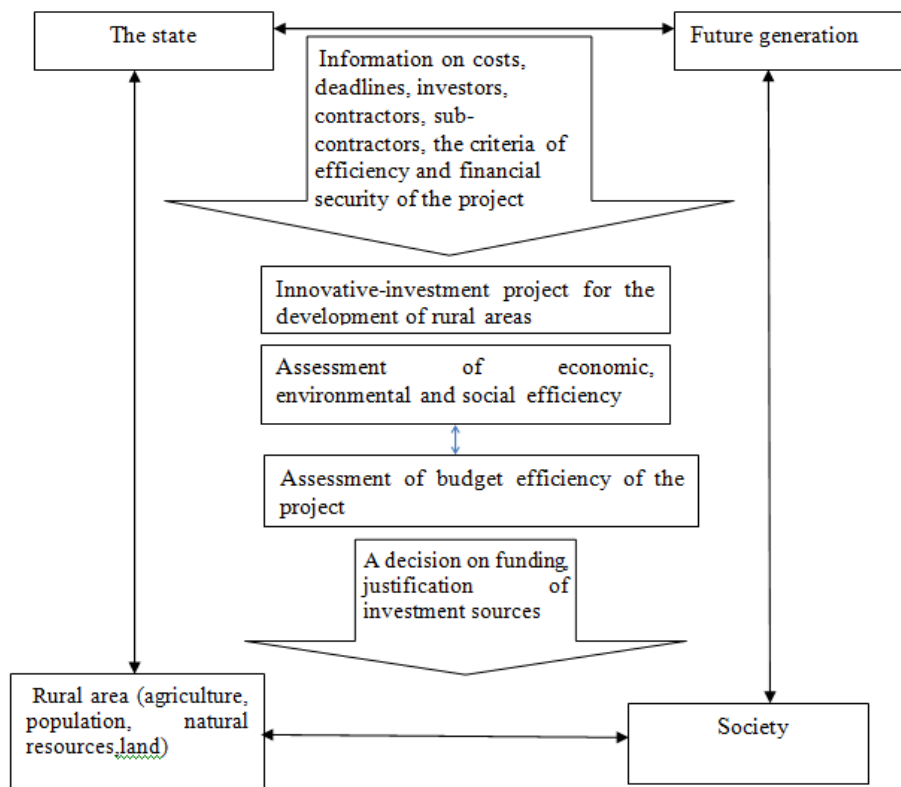


Fig. 2. The system of evaluation of efficiency of innovative-investment project for the development of rural areas

Source: developed by the authors

The investment project of development of rural territories should be taken as a unity of three subsystems: economic, environmental and social. Within each system are solved by their own goals: economic goals include reducing the cost of production; resource saving, increase income; improving the efficiency of production, etc.; environmental problem can be represented as a decrease in the level of contamination of the natural environment, reduce the environmental risk, etc.; social problems are characterized by reduction of morbidity and mortality, improved quality of life etc. it is obvious that methods should be based on both the principles of evaluation of the effectiveness of IP rural areas.

We believe that the implementation of IP-centric sustainable development of rural territories should be based on the following principles: optimality of specialization areas – when choosing a strategy in this system it is necessary to clearly determine the most efficient and cost-effective industry

for the area taking into account the generated potential, market conditions, regional specifics and the priorities of investors; continuity and long-term actions within the system must have continuous and long-term in nature and carried out in the framework of development strategies; in the process of management of sustainable development of rural areas should be involved not only governments and investors, but also representatives of rural communities, including with the aim of monitoring and evaluation; investment processes should be designed for at least a few components of the sustainable development of rural areas (e.g. social infrastructure; production and minimizing the negative impact on the environment, etc.); the sequence and combination – you define the sequence of development components of sustainable development of rural areas due to resource constraints; efficiency and minimization is necessary to maximize the efficient use of investment resources (both public and private).

Thus, compliance with the above principles in assessing the effectiveness of investment development of rural areas specific characteristics, including the potential and problems of rural areas; to formulate the strategy and priorities of development of rural territories; to determine the range of investors and to align their interests with the interests of the territory; to justify the mechanisms of interaction and coordination between actors of the system; to optimize the investment process.

Consider the relationship and interdependence of goals and objectives in the development of the three subsystems that must be considered when identifying the effects arising from the implementation of IP improving the quality of life of the rural population as a macroeconomic indicator characterizing a set of social, cultural and moral values. From the point of view of economic growth "quality of life" includes the following components: the state of the natural and social environment; conditions of work and life; access to cultural values; the level of satisfaction of needs of health, education, social welfare; legal protection of the individual. The connection between economic growth and quality of life is ambiguous and can be explored in two directions in the evaluation of IP. Vector of positive connection is obvious, since economic growth is focused on improving the quality of life, however, a negative relationship can be traced in the processes of environmental pollution, improving resource intensity of economic processes. Thus, the principles for evaluating the effectiveness of IP in the development of rural territories is necessary to identify the positive and negative impact of how the three components of the subsystem.

It is known that depending on the object of valuation distinguish economic efficiency (ratio of costs and effects of the project and its compliance with the goals and interests of the participants in the form of money); social (the ratio of costs and results of the project); environmental (the ratio of cost and environmental outcomes) [13]. Some scientists allocate also financial and budgetary performance to be considered when assessing the PI for the development of rural areas [14].

An important task of realization of the investment project in agriculture is the provision of rational nature management, which is considered as a set of principles, forms and methods of organization of rational use and reproduction of natural resources, preserving the environment to ensure environmental safety. So, achievement of environmental management at the level of IP implementation will occur in compliance with the requirements and standards that limit harmful effects on the environment; the sustainable use of natural resources, their restoration, clean water and emissions into the atmosphere; the creation of high-precision controls and the quality of environmental protection.

In the selection of the IP development of rural territories it is mandatory to evaluate their impact on the environment. With this purpose in the initial stages of project development it is advisable to consider the issues related to the protection of the environment and natural resources to choose an alternative solution. When developing projects in a team should include different specialists, allowing to evaluate the impact of economic, social and environmental factors. This is due to the fact that one specialist is not able to conduct a comprehensive assessment of the economic and environmental impacts of the project that requires joint efforts of specialists.

Difficult is the question of choice of the evaluation method of losses caused by the implementation of IP. First, it is necessary to systematize the positive and negative aspects of the impact of the project on the environment, then analyze the changes in productivity or the quality of the environment. Factors that contribute to increased productivity, it is easy to assess, but changes the

quality of the environment under evaluation difficult. We believe that the intangible consequences of realization of the investment project on the state of the environment in rural areas, it is advisable to assess using a survey of experts.

The process of investment in development of rural areas needs to meet the needs of the participants of the investment process (investors in investment efficiency, contractors – in the income profits of the state in the development of the economic system) and, ultimately, bring positive impact on socio-ecological-economic situation of the region and country where they are implemented. In this regard, we believe that investment performance should be evaluated with a special complex system of indicators. Thus, the efficiency of investments in development of rural territories should be based on comparison of achieved results with performance goals.

Note that the calculation of efficiency of investments it is advisable to taking into account effects derived from the economic, social, and economic subsystems of rural areas based on the use of monetary and physical indicators, as well as the integral indicator, in dynamics can describe the achieved benefits from the investment.

Study of the effectiveness of investment in rural areas is complicated by the lack of statistical information. In this regard, the system's performance investing consist of groups of indicators, which characterize its impact on various components of sustainable development, they are numerous and depend on the objectives, areas of investment. So, for example, the net investment per unit area of the rural territory and the multiplier of their actions point directly to the effectiveness of the implementation of the processes of modernization and innovation development, take into account the direction of diversification of their implementation and obtain a greater income.

If to assess the effectiveness of IP in agricultural production, among the indicators of economic efficiency it is advisable to allocate the return on assets and profitability of the means of production that characterize the processes of reproduction. The productivity and pay of workers in agriculture show the effectiveness of use of labor resources. Gross output per 100 hectares of agricultural land determines the efficiency of the use of land in economic circulation.

The wages of the employees, ratio of employees to volume of investments into fixed capital, (in terms of the lack of manpower in rural areas), the ratio of wages to productivity, etc. will allow to assess the social efficiency. As an integral indicator of this group is proposed to use the arithmetic mean between the base growth performance of the group.

Note that the ratio of the amount of taxes to the volume of investments in fixed capital, the ratio of the volume of budget revenues as a result of investment activities to the amount of budget funds and grants, aimed at implementation of investment projects will characterize the budget performance of individual in development of rural areas.

Due to a lack of statistical information on the assessment of environmental efficiency of investments, it is necessary to clarify the scope of investment in fixed assets, the use of which contributes to the protection and rational use of water resources, protection of atmosphere rational use of land. Then the integral indicator of efficiency of investment can be calculated as the root of n -th degree of the product of the underlying growth performance of different types of efficiency.

It should be noted that the standards are used during the ecological expertise of investment projects that are only indirectly related to the environment. For decision-making about the placement of the object in a certain area, in practice, the set of unrelated regulations that do not take into account the integrated impact on the environment. In General, the use of sanitary and hygiene standards - maximum allowable concentrations, maximum allowable emissions or doses of harmful substances. It should be noted that they do not fully meet the requirements of environmental regulation, and therefore can not serve as the basis for protection of natural components. First, not all pollution sources are established maximum permissible concentration. Secondly, there is no MPC for various combinations of different substances. Third, the MPC of the same substances for plants and animals can be substantially smaller than for the man.

The current state of development of the economy requires the establishment and unquestioning compliance with environmental restrictions and regulations. Therefore, for effective implementation of investment projects at the same time with a balanced development of the territory of its location in addition to hygienic norms should be used environmental regulations, which are complex, provide

acceptable levels of exposure not only to humans but also to ecosystems and their components. The main condition for the realization of this postulate should be a principle not to exceed load on the territory samovar potential of the natural complex of the area.

Quantitative criterion of the degree of balance of natural and industrial potentials is an indicator of environmental territory, which can be expressed by the mass of the substance, standardized hazard (toxicity) and are presented in energy or monetary terms. Environmental separate territory objectively equal to the maximum permissible anthropogenic load, because it takes into account biomass and primary productivity of ecosystems, the degree of damage to the natural environment, the distribution of biomass, the energy load on the territory and its social characteristics, so it should be the basis for measuring the carrying capacity.

Index of environmental site needs to be legally approved as the standard that will be included in the system of environmental support of investment projects implementation. This approach will allow to predict the further development of investment projects and to develop measures to prevent the degradation of the natural environment during their implementation.

Based on the above, it seems appropriate to apply integrated environmental regulations, developed on the basis of energy approach, such as environmental site. The calculation of environmental standards must be pursued in tandem with sanitation and hygiene indicators at the preliminary stage of investment project implementation. For the application of territorial environmental standards necessary to create the institutional framework and robust tools that will enable them effectively apply. The technique of definition of indicators of ecological areas should be included in the consolidated guidelines for the development of environmental sections of project documentation.

Conclusions and further research. Duration of transformation processes in agrarian sector of national economy, improve the technological level of agricultural production and its gradual commercialization, contrary to expectations, have led to significant deterioration in the welfare of peasants and decline of rural areas. Strengthening of negative tendencies in the development of rural areas takes into account the conservation accents in the formation and implementation of rural development policy, neglecting the role of rural communities and identity, limited opportunities for self-realization and satisfaction of life of the villagers. The traditional challenge in addressing the problems of rural areas is the limited available financial resources, weak rural financial institutions and instruments used by them. Under these conditions, the implementation of the investment process of rural development based on sustainable development, requires the use of adequate existing institutional features of approaches to evaluation of investment projects and their financial security.

For full application and calculation of integral indicators of innovation and investment projects aimed at sustainable development of rural areas, it is important to conduct a strategic analysis of the locations of investment projects, and rank her on indicators of carrying capacity. This assessment will be the basis for the ratio of the impact of planned activities and opportunities of the natural complex to reproduce without the occurrence of irreversible changes in the ecosystem. This will allow to regulate activities on the implementation of investment projects and to build a system of making investment decisions based on the principles of sustainable development.

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Received: 22.05.2017

Reviewed: 14.06.2017

Accepted to publishing: 23.06.2017

PROBLEMS OF CLASSIFICATION OF AGRICULTURAL PRODUCERS: FOREIGN EXPERIENCE AND NATIONAL FUNDAMENTALS

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Abstract: *In the article an estimation of methodical approaches to implementation of the process of typology of agricultural enterprises on the basis of generalization of domestic and foreign experience has been carried out. It has been established that now in Ukraine, in relation to agricultural enterprises, there is no single methodological approach regarding the typology of agricultural enterprises. In practice, for the formation of the information array, a methodology is used to compile statistical reporting "Basic indicators of production and economic activity of agricultural enterprises". However, it is not used in determining the taxation regime of farms in the corporate sector of the agrarian economy.*

It has been established that in certain EU member states the EU applies a single approach to all households and farms by assigning them to agricultural producers without taking into account their legal form on the basis of sales volumes or assessing their ability to generate, level of marketability, or more typical of the former socialist countries, Apply their own thresholds for agricultural households and individually define the conditions for legal entities and farmers.

We believe that in order to ensure the effectiveness of state support for agricultural production and strengthen its role in the development of rural areas, it is necessary to determine the indicators and thresholds for the acquisition of the status of agricultural producer. An important indicator in establishing the status of agricultural commodity producer is the level of income derived from the sale of agricultural products, including incidental and related, equal to the size of the minimum wage for each member of the household.

Key words: *typology, agricultural enterprise, threshold value, agricultural commodity producer.*

JEL Classification: Q00, Q12, Q18

Problem formulation. The agricultural sector of the economy is one of strategic and core segments of the Ukrainian national economy. Its actors form an important part of the State budget, defining bases if food security, saving rural traditions and mentality. The systemic transformations of high quality, able to increase competitive performance level of agro-industrial production in the conditions of globalization and providing of the State food security are necessary. One of these mainstream ways of agrarian transformations is a complex deepening of agricultural production specialization, increasing of its concentration level based on cooperation and food integration.

In order to solve these problems the studies of allocation of agricultural production on farms with different farming types and different organizational and legal economic forms are needed. The main place in this process belongs to productive type which is a group of agricultural producers with the same specialization and branches connection as well as relatively similar intensity and production levels.

In the same time, the implementation of the Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the One Part, and Ukraine, of the Other Part foresees the reform of the national agricultural statistic system according to the requirements of the EU statistic office.

Analysis of main researches and publications. The question of positive impact of efficient agricultural production on rural development was studied in the works of Borodina O.M. [1, 2], Borshchevski V.V. [3], Bulakh T.M. [4], Gazudi S.M. [5], ГGogol T.V. [6], Golovni O.M. [7], Gubeni Y.E. [8], Diyesperova V.S. [9], Lisoviy A.V. [10], Malika M.Y. [11], Morozyuk N.V. [12], Pavlova O. I. [13], Prokopy I. V. [14], Talavyri M.P. [15], Stegney M.I. [16], Yurchyshyna V. V.

[16] and others. But they didn't pay attention to the typing of agricultural producers for taking efficient management decisions on micro and macro levels.

The aim of the article is to define the role of agricultural producers in rural development. It is defined on the base of their typing according to main indices of their economic activity.

Main content.

Considering the typing through the prism of the scientific methodology, it should be noticed that it represents the dialectic of the general and concrete as for the specificity of economic relations and agricultural enterprises, also it represents the present inter-relation of all production elements.

We often meet two notions in the agrarian economics: «productive type» and «farming system». Until the middle of 20-th years of XX-th century researchers studied mainly eight kinds of farming systems which were generalized by O. Ludogovsky (pasture, layland, cereal system, improved cereal system, crop rotation farming, outdoor run, grassland and free system). O. Fortunatov noticed that farming system was homologated with the arable farming system [18, c. 460]. According to O. Skvortsov farming system should be understood as a combination of production elements which impact on the mode to obtain the rent on a given farm. The last one, in its turn, is defined by product sold on the market, so the name of farming system should be given according to this product [19, c. 51]. In the soviet economics the notion "farming system" was considered in a wide and narrow sense. In the first case it was understood not only as a rational organization of production, but the notion covered also all aspects of distribution of created material commodities. In the second case the farming system was linked with a kind of agricultural production and gathering of branches, intensity level and system of some branches of crop and animal production [20, c. 4-5]. The last definition is the most correct and substantial.

The typing problem of agricultural producers was treated in the works of O. Yermolov, O. Ludogovsky, O. Skvortsov, I. Stebut, O. Fortunatov, O. Shyshkin. But the mentioned researchers studied only the organizational and technical side of productive type and economic system leaving outside social and economic character of enterprises, capital intensity and specialization.

In the condition of innovative development of agriculture, implementation of innovations into production, processes of social division and organization of work are significantly accelerated which lead to appearance of new specialized farms, which didn't correspond to the actual scientific farming systems. Thus the category "productive type" has replaced the category "farming system". Also, as it was noticed by M. Savenko, the farming system is a singular category which belongs to concrete farm and to concrete farming conditions, and the productive type is a group-wide notion which concerns collectivity of agricultural producers. [21, p. 5]. According to him, the productive type means a collectivity of farms with similar specialization and combination of branches, and also with the same intensity level.

It should be noticed, that the work of L. Zaltsman and O. Ilyichov published in 1961 became some kind of revolution in the economic researches devoted the organization of agricultural production [21]. Its authors proposed the transition from farming system related to regions and micro-zones according to agricultural and economic territories zoning, to productive types, as every administrative region is often characterized by natural and economic conditions as well as by the presence of farms with different specialization types.

Also, as it was noticed by L. Kaller, we should not identify productive type as a specialization or branch of production [22, p. 13]. As agricultural producers having similar specialization and similar composition of main branches, can be located in different natural and economic conditions, which stipulates differences in intensity and farming systems, hence they belong to different productive types.

Since 1960 years the study of typing of agricultural producers has become more systematic and more or less unified from the methodological point of view. During years 1965-1980 productive types were studied by A. Barbashyn, D. Vermel, I. Zhadan, L. Zaltsman, M. Isayenko, L. Kaller, P. Kalm, S. Kolesnev, V. Kryvoruchko, Y. Kushnir, S. Kutikov, G. Losa, M. Makarov, O. Nikonov, K. Obolensky, M. Savenko, V. Tunin, P. Shchepienko and others.

In the results of these studies the researchers have defined 400 productive types of agricultural enterprises, where 50 types are considered as main ones; they have developed the

theoretical and methodological bases for typing and classification, have justified more than 70 rational types of farms etc.

But these researchers have different views of the essence of productive type. Thus I. Zhadan considers the essence like concrete farms which differ by peculiarities of their specializations, organizational structures and production technologies in main branches with enough stable income source [23, p. 7]. Other researchers like L. Zaltsman and M. Isaenko united in the same productive type agricultural enterprises located in some natural zone, with similar specialization and connection of branches, with similar intensity level, size and ratio of main elements of agricultural production [21, p. 3]. The same explanation of productive type is given by L. Kaller, which considers it like a group of agricultural enterprises similar by their specialization, branch structure according to field-specific production branches, intensity level and main farming elements that emerge from the similarity of objective natural and economic conditions [24, p. 12-13]. The later researches, like the works of M. Isayenko contain the definition of productive type as a group of agricultural enterprises which differ by their productive tasks, natural and economic conditions, as well as production results [25, p. 63]. According to L. Pyanova, productive type is a group of farms having similar specialization, acting in similar natural and economic conditions, having similar level of agricultural production intensity and similar management system [26, p. 9].

The placing of agricultural enterprises in some classification type is called typing. According to E. Lyonde, the typology is a science about type development for further analysis of complex real objects and courses which are different but belong to the same kind and classes system, and their division is a result of related actions [27, p. 505]. Furthermore the best typology of agricultural producers should be characterized by maximum significance of type diversity between classes, on one hand, and maximum uniformity inside classification groups, on the other hand [28, p. 142].

We believe, that the productive typing should be understood like a process of agricultural producers grouping according to close production field, connection level of agricultural and non-agricultural branches, character of productive and inter-sectoral relations, organizational structure and management system, natural and economic development conditions.

The need of classification and typing of agricultural producers was defined according to the following main objectives for their further application on the State management level [29, p. 4]:

- a) planning (classification of producers is crucial for planning development of agricultural sector and implementation of complex measurer aimed to State target aids and regulation of some agricultural productions);
- b) macroeconomic forecasting (typologies are needed for understanding mechanisms of impact regulation on some productive types of agricultural producers and for its consequences evaluation);
- c) generalization of advanced experience (typologies allow to define the best farms among some productive type or class for further detailed analysis);
- d) providing interrelation between management levels (typologies allow to change studies' scale and to carry out extrapolation of forecasting evaluations of some strategic decisions impact on sectorial and territorial management levels).

Generally, present and rational productive types of agricultural producers are defined. Present productive types are groups of real farms having the same conditions and challenges, branches composition and final products, intensity levels of main productive branches and farms in general, qualitative composition of productive processes and technologies etc [30, c. 4]. They reflect the mass experience of farming and often are lacking advanced and innovative achievements of agricultural science. The definition of rational productive types of agricultural producers is a result of the scientific activity. This definition was elaborated for the perspective which stipulates that according to their organizational and technological structure these types should reflect achievements of science and practice, should give the space for the scientific and technical progress development [24, p. 7].

The further transformation of the agriculture requires taking into account the present internal socio-economic situation, the changes at world agricultural markets and the enlargement of Ukrainian integration relations. The experience of EU countries, namely in classification of agricultural producers, could be very useful in this relation.

It should be noted that the classification of agricultural producers has a quite different purpose abroad. Thus, it is not only aimed to study of internal processes but also to formation of background for the development of different agricultural enterprises according to elaborated social policy and to support of different types of agricultural producers development.

Obviously, for the implementation of adequate and efficient coordination of agricultural development the authorities need information about resources provision to producers, their productive potential and their role in country food security guarantee and in rural development. It will give the possibility to define producers which can be considered as agricultural producers. In fact, all over the world agricultural products are supplied by specialized agricultural enterprises and farms as well as by a number of small households producing for their own consumption and also by summer residents having "seasonal kitchen gardens". So, many countries have the lists of indices and minimum thresholds defining agricultural producers.

Nowadays the reorientation of sectorial agricultural support programmes to complex rural development programmes should be one of the Ukrainian agricultural policy priorities. Creation of conditions for the agriculture sustainable development based on the formation of relevant institutional environment should become the strategic objective of the State policy. Thus it will guarantee efficient use of agricultural potential, as the agricultural sector, being dominant in rural economy, is multifunctional and produces not only material commodities but contributes also to the reproduction of social values whose quality and quantity can't always be assessed.

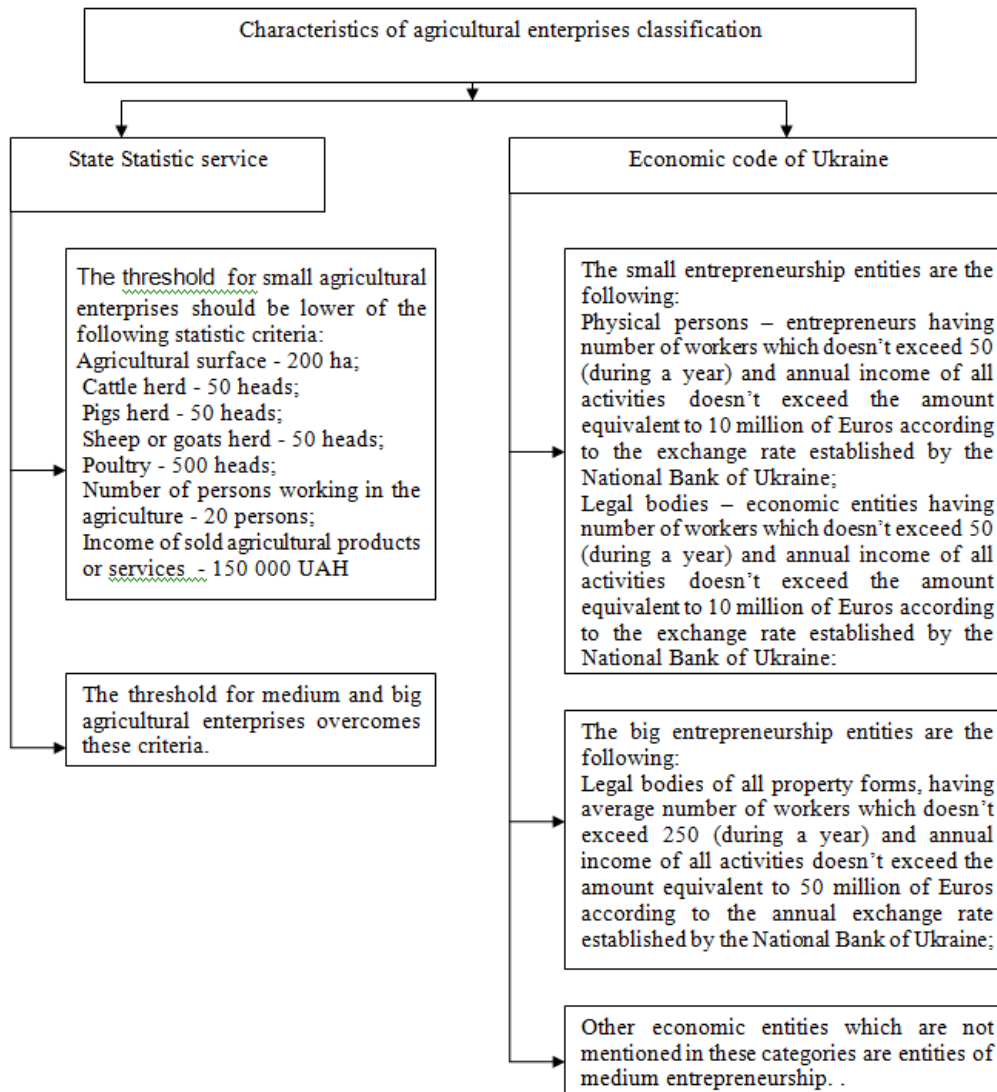
The agriculture plays an important role in the soil fertility conservation and in land protection against erosion and other negative phenomena of natural and anthropogenic character. These non-food aspects have the characteristics of social riches but can't be fully assessed by the market efficiency criteria although one of them concerns environment improvement. The agriculture's polyvalence is a component of national welfare and defines the necessity of state support in creating conditions for rural sustainable development which means a stable functioning of agricultural enterprises guaranteeing growth, diversification and efficiency of rural economy, growing level and quality of rural population life, amelioration of ecological situation in rural area. The sustainable rural development will improve rural mode of life and will create condition giving the possibility to rural area to accomplish better its national functions – productive, social and demographical, cultural, recreational, ecological.

It should be noticed, that the majority of scientists and practitioners have a blinkered vision of rural areas role and importance. Thus, the notions "rural development" and "development of agriculture" are homologated, which shows a blinkered vision of rural areas role that are considered only as an element of food security. In the same time the agriculture plays an important role in the social and economic development of rural area. That is why when developing and implementation national and regional programmes of rural development it should be considered as a defined social medium with its specific features of coexistence and economic activity.

We consider that a blinkered vision of the notion "rural social medium" became a reason of a low efficiency of the State policy measures aimed to reforming of the agrarian economy with changing organizational and legal forms of economic activity and support of some sectors.

As known, the Ukrainian science and practice use different systems of the classification of agricultural producers. The most of them have informative character without any practical application as they don't use fully the internal process taking place in these systems, motivation of their members and their administration etc.

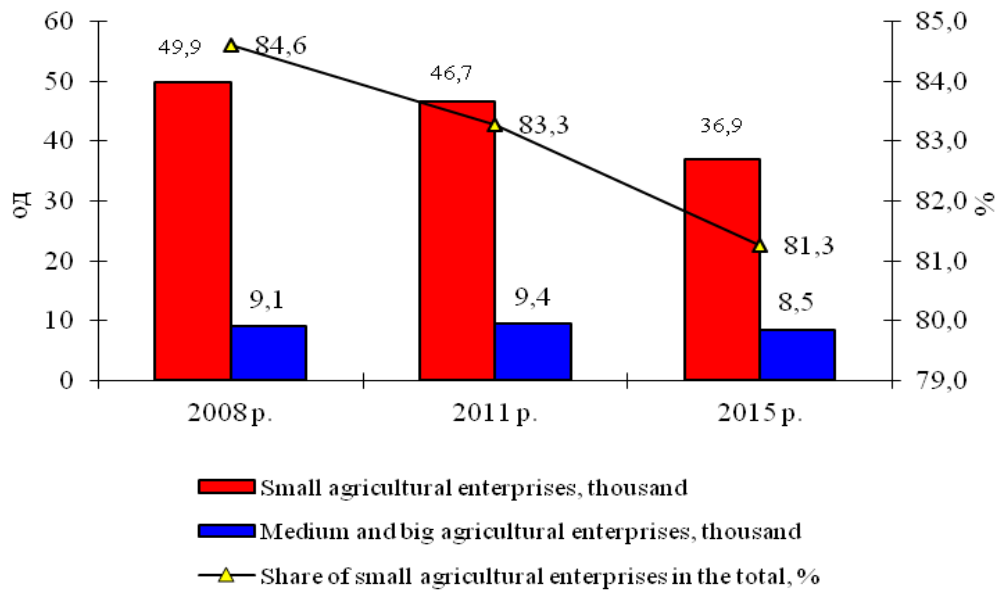
Nowadays there is no unique methodological approach to the classification of agricultural enterprises in Ukraine. In practice the method of statistic reporting « The main indices of productive and economic activities of agricultural enterprises » (Picture 1) is applied for the formation of the informational massif. But it is not used for the definition of fiscal regime applied to enterprises belonging to the corporative sector of the agrarian economy. To the classification of business activity bodies does not take into account the peculiarities of agricultural production.



Picture 1. Methodological approaches to the classification of agricultural enterprises

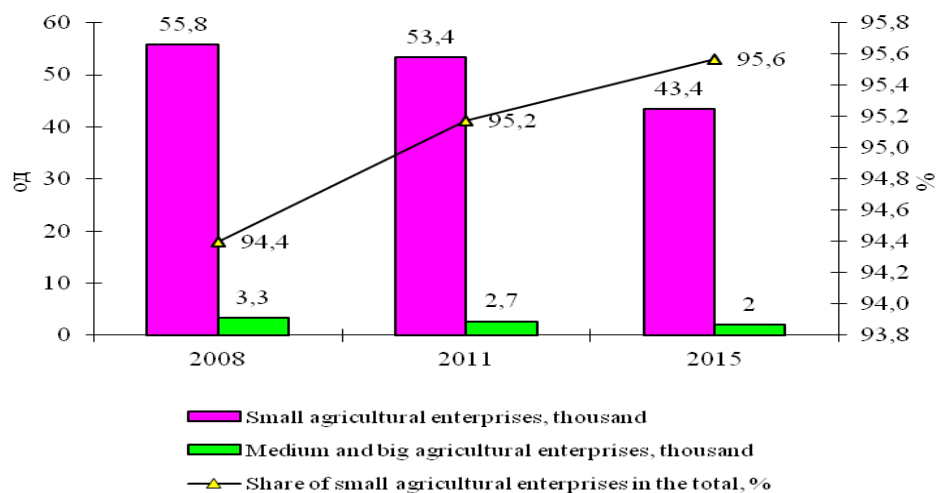
This circumstance leads to difference of data concerning the presence of small, medium and big agricultural enterprises (Pictures 2, 3).

As known, the study of agricultural producers functioning peculiarities is done on the base of agricultural census which is main statistic study characterized by the largest covering of respondents. Thus, according to the method of the Farm Accountancy Data Network (FADN), in order to be considered as a universe farm, EU producer should have at least 1 ha of land; if he has less land, his production must not be lower than the established threshold (it is established additionally for every country). But, in order to be considered as a commercial producer and to be included into FADN annual survey, he must have farm of the size sufficient to ensure his full employment and to bring income satisfying his family's vital needs. In practice, it means that the farm should overcome the minimum threshold of standard gross income, which is established differentially by every EU country.



Picture 2. Dynamics of number of small agricultural enterprises (according to the method of the State statistic service).

The capacity of farm resource potential to generate normative value of this index is taken as a base for the calculation of gross revenue. Then we calculate the ratio of farm standard gross revenue (SGM) to the fixed unit of economic level – ESU (European Size Unit) (now ESU is equal to 1200 Euros). The received result is compared with the established thresholds (Table 1), in the case of their overcoming the far is considered as commercial one.



Picture 3. Dynamics of number of small agricultural enterprises (according to the method of the Economic code).

As we see, in despite of the necessity to respect the principles of the Common agricultural policy in EU, every member-country can establish its own size of value-conscious and natural indices in order to classify economic actors as agricultural producers and to include them into national census. This classification can be based on agricultural surface, livestock (animals or poultry), volume of sales, value of produced commodities, requirements for sale part of produced commodities etc.

We can state that some EU countries apply the unique approach to all farms and households when considering them as agricultural producers regardless their legal form (USA, Denmark, Netherlands, Greece etc.). This approach is based on sale volumes or on the evaluation of their potential to generate, or on commercialization level. Also, especially in the former socialist countries, some own thresholds are applied for households and different conditions are defined for legal bodies and farmers.

Table 1. Thresholds of ratio SGM / ESU in EU countries

Country	Thershold of SGM / ESU
Belgium, Netherlands, Great Britain (except Northern Ireland)	16
Bulgaria, Romania	1
Czech republic, Italy	4
Denmark, France, Luxembourg, Malta, Austria, Slovakia, Finland, Sweden, Great Britain (its part Northern Ireland)	8
Germany	16
Estonia, Ireland, Greece, Spain, Cyprus, Latvia, Lithuania, Hungary, Poland, Portugal, Slovenia	2

Source: Done according to source [19].

It is evident, that the application of a unique approach is easier, as a unique management object and unique data mass are formed. In this case, commercial producers can be separated from non-commercial producers according to a higher threshold. As we see in Table 1, for example, for being classified as commercial producer, Dutch farmer should produce 5,3 times as much than threshold of standard gross revenue for household.

Let's look at the Japanese practice on defining the status of agricultural producer. In Japan there is a difference between commercial and consuming households according to sale volumes or surface in use. In this country the farm is considered as commercial if it has a parcel of more than 0,3 ha in use or if during 12 months it earns at least 500 thousand yens on sale of its products. Farm or household working on less than 0,3 ha or earning less than 500 thousand yens on their annual sales are considered as non-commercial (consuming) [20].

According to the Canadian approach only those producing agricultural products for sale belong to agricultural producers, so consuming households can't belong to this category [21].

It should be mentioned that in EU farms are classified mainly according to two criteria: economic size and type of activity. Till 2010 the classification of farms according to economic parameters was conditioned by the necessity to determine the size of their direct revenue (SGM – Standard Gross Margin). The annual production value obtained from one hectare or one head minus direct production costs is considered as direct revenue of activity (plant growing or animal husbandry). The revenue size is calculated for every statistic region and for every activity per one hectare or per one head. It is interesting to notice that the value of standard revenue is updated every two years in order to take into account changes of prices level and changes of productive activity efficiency.

The calculation of standard gross margin is done in the framework of determined zones by the calculation of sowing surfaces and of livestock according to established coefficients. Basing on the defined unit of economic level (ESU), every farm can be referred to one of nine classes. The minimum margin for being classified as agricultural producer is 4 ESU (in Poland the minimum margin is 2 ESU). It is evident, that farms having lower standard revenue are weak from the economic point of view and can't have a stable position in market.

As the standard direct revenue had negative value, since 2010 a new parameter of standard production was implemented (SO – Standard Output). The period of its definition was prolonged from 3 to 5 years. On this base the regional coefficients of standard production were elaborated.

Thus, medium economic value of farms in EU is 34 ESU, the amount of actives is 309 200 Euros (it is the least in Poland – 77 200 Euros). In the same time, the medium surface of one farm is 34 ha, but this figure varies depending country (Table 2).

Table 2. Classification of farms according to laboured surfaces in EU countries (2010), %

Countries	Number of farms, thousand	Number of farms by surface				
		till 5 ha	5-10 ha	10-50 ha	50- 100 ha	more than 100 ha
Belgium	42,9	22,6	12,1	44,2	15,8	5,3
Bulgaria	371,1	91,4	2,9	3,5	0,8	1,4
Cyprus	38,8	89,7	5,1	4,4	0,5	0,3
Montenegro	48,8	88,1	6,2	4,1	0,8	0,8
Denmark	41,0	4,9	19,5	41,5	14,4	19,7
Estonia	19,7	33,5	20,8	31,5	5,6	8,6
Finland	63,9	9,7	12,5	54,9	16,9	6,0
France	514,8	27,0	9,1	26,9	19,0	18,0
Spain	989,8	53,1	14,3	22,1	5,3	5,2
Lithuania	199,9	58,7	20,0	17,0	2,4	1,9
Luxemburg	2,2	18,2	9,1	22,7	31,8	18,2
Latvia	83,0	33,5	27,5	32,8	3,3	2,9
Malta	12,9	97,8	1,7	0,5	-	-
Netherlands	72,0	29,2	13,9	41,7	12,5	2,7
Germany	299,1	9,2	15,8	46,5	17,2	11,3
Norway	43,3	13,3	17,4	61,6	6,4	1,3
Poland	1505,7	55,2	22,3	20,8	HJ	0,6
Portugal	305,3	75,6	10,9	10,1	1,5	1,9
Czech republic	22,9	15,3	18,3	36,2	10,5	19,7
Romania	3856,3	93,1	4,7	1,6	0,2	0,4
Slovenia	74,7	61,2	23,4	14,9	0,5	-
Sweden	70,9	12,8	21,9	41,3	12,8	11,2
Hungary	577,0	87,0	4,6	6,0	1,1	1,3
Great Britain	202,4	15,6	13,3	35,1	16,3	19,7
Italy	1630,0	73,2	11,3	12,7	1,8	1,0
Total	11088,4	-	-	-	-	-

Source: According to the Farm Accountancy Data Network (FADN)

The definition of agricultural activity type is the next criterion which is used for farms classification and is defined on the base the part of given activity in the creation of Standard Cross Margin on the farm which means its specialisation.

The farms where none activity exceeds 1/3 SCM are defined as "mixed farms"; the farms where the part of two activities is in diapason from 1/3 to 2/3 SCM are defined as «two ways»; the farms where one activity exceeds 2/3 SCM, are specialised farms. It should be noticed that the type of agricultural producer defined according to this criterion characterizes its system of production.

The economic size of farm and its type are standard criteria for their typing on the base on economic activity reports functioning in EU. In the same time, EU membership requires the respect of CAP principles and rules by all agricultural producers, in particular it concerns the permanent actualisation of state agricultural classifications and FADN which is closed linked with them.

Thus, the unique typology of agricultural producers is a unique classification system of agricultural producers in EU according to their economic size and producing activity types. The unified classification is an only instrument for farms taxonomy in EU, which allows obtaining the representative selection of farms and gives the information for justifying CAP measures, as well as to compare EU farmers' potential and results of their activity.

We think that FADN in the agriculture is not only the base for development of efficient CAP, but first of all it is the instrument for providing direct information to farmers helping them to take justified management decisions. The other direct advantage of accountancy on farm is obtaining of skills for systemic and purposeful collection of farm financial documents. This possibility will turn out to be very useful for finances management, e.g. VAT calculation on general bases, economic analyses

while investments raising (grants, grace credits). In general 4 168 200 farms are covered by the system of Farm Accountancy Data Network in EU. The most of them are in Poland (757 300) and in Spain (739 600), the least are in Malta (1 400). We think that the orientation of Ukraine toward to the EU integration and to deepening of globalization processes needs the respect of main requirements and baselines of CAP, particularly in the part of agricultural producers typing.

According to P.V. Savchenko, E.F. Avdokushyn, M.S. Aliman, the notions of rural enterprise, farm, family farm are used for the definition of a similar organizational form of agricultural activity and free entrepreneurship. The names diversity is mainly conditioned by local and national peculiarities. Thus, the notion “farm” is traditional for England, Canada, USA; the notion “rural enterprise” is more natural for Germany and Ukraine. Different forms of agricultural activity, as collective, so individual are possible in rural community. Household is one of the forms of individual activity [22].

In spite of the adoption of the law regulating households’ activity the level of legal provision remains very low. The definitive identification characteristics of households are expressed very weakly. Some attempts to classify households in the national practice didn’t take into account the international experience and approaches which are successfully applied by administrative authorities of EU.

An important number of small farms in general number of farm enterprises is a generally recognized phenomenon of the most countries in the world. The difficulties of farms classification are explained by their large diversity. In order to separate households into the separate category characterized by a special economic nature and orientation, the EU statistics has a notion “agricultural activity” that is defined by “output threshold”. At the same time, there is no defined relevant margin for farms number in EU, which is explained by the diversity of natural and geographical, historical and economic conditions in EU countries. The output threshold of economic activity, for example in Netherland is 3 ha for wheat production and 1,6 ha for sugar beets production. The agricultural activity of farms, which is lower than this threshold, is not reflected in the statistical information; it means that the farm is not defined as an agricultural producer. But we should remember, that production volume of small farms excluded from the survey, should not exceed 1%, and in some cases 2% of gross production. In order to correspond to these conditions, every EU country defines its own output threshold of economic activity. Thus, in Hungary in the period of its adhesion to EU, its national statistical service had to use as national so international methods for the primary definition of the survey objects and for its harmonization with the European practice [23].

Till 2012 the notion “farm” in the Hungarian statistics included the combination of physical indices for the evaluation of agricultural production. But, using of EU methods based on threshold values for agricultural production didn’t change significantly the physical indices for farms evaluation, as we see from the agricultural census in 2012 (Table 3).

Table 3. Indices thresholds for agricultural censuses during 1972–2012 in Hungary

Indice	Year of census				
	1972	1981	1991	1994	2012
General surface of arable land, ha	0,15	0,15	0,15	0,15	0,15
Orchards, vineyard, kitchen gardens, ha	0,08	0,08	0,08	0,08	0,05
Cattle, heads	1	1	1	1	1
Pigs, heads	1	1	1	1	1
Horses, heads	1	1	1	1	1
Sheep, heads	1	1	1	1	1
Poultry, heads	50	50	50	50	50
Bees, hives	20	20	25	25	5
Rabbits, heads	20	20	25	25	25
Other small animals, heads	–	–	25	25	25

Source: [24].

Basing on the Eurostat methods, in Hungary the part of farms producing for their own consumption achieved 60%, about 28% of farms produced as for the sale on market so for their own consumption. Only 12% of farms sold their products at the open market. The same structure of

agriculture is typical for all EU countries. It is confirmed by the data of Farm Structure Survey-FSS, collected by national statistic services of EU countries.

The first agricultural census in form of FSS in 27 EU countries took place in 2010. The output threshold of agricultural activity for farm to be included into statistical survey was 1 ha. Through an exception for some countries such as Czech Republic, Denmark, Germany, Great Britain the FSS-2010 threshold was 5 ha. The farms with small parcels were classified as «kitchen garden», which is explained by their important role in the life of rural family

According to the recommendation of the Commission of rules regulation EU EC 1200/2009 dated by 30.11.2009, the Eurostat officially introduced into the system of statistical survey the «kitchen garden», which means a parcel used for family needs and which is located beyond the main agricultural surface. It is easy to notice that «kitchen garden» corresponds to parcel of household [25].

The agricultural census FSS 2010 covered 12 million of farms functioning in EU-27. It is important to notice that 49% of farms had less than 2 ha of agricultural land, in the same time 325 thousand farms, which is about 3% of the general number, had the parcels of 100 ha and more. The small farms with 2 ha presented 2% of all agricultural lands in EU-27 and the farms with 100 ha and more presented 50% of all surface.

Thus we can make the conclusion about reasonability to define at the legislative level the criteria of output threshold of agricultural activity that will give the possibility to separate households from the mass of traditional agricultural producers and to exclude the apprehension of households as a mass small entrepreneurship form.

Let's generalize the approaches to the agricultural producers classifications presented in the main normative texts in Ukraine. Thus the Ukrainian law about the amendments to Article 1 of the Ukrainian Law about the agricultural cooperation (concerning specification of the term "agricultural producer") says that «agricultural producer is a natural or legal body of all property and economic activity forms whose gross revenue obtained from the sale of its own agricultural raw or processed products, if any agricultural lands (arable lands, haylands, pastures or perennial planting etc.) or livestock in property or in use including the rent, exceeds 75% of general gross revenue for previous fiscal year. This restriction doesn't concern persons running "individual agricultural households". We consider that this interpretation of agricultural producer is not clear and allows designating as representative of this category trade intermediary structures as well as producers using industrial technologies for agricultural production (greenhouses, enterprises of egg and meat poultry breeding). This condition allows different business entities that don't produce agricultural products to benefit some fiscal privileges and to obtain State aid.

The same situation concerns also households which naturally produce agricultural product for their own consumption and sell surplus. There are households whose agricultural production composes the main part of their aggregate revenues.

The researches carried out showed that the harmonization of the notion «agricultural producer» with the adopted international standards (exclusion from this notion of households having only «kitchen gardens») will allow to reduce their total number in 5 times. Consequently, the implementation of critical sums for sold products or resources availability at the level adopted in the USA or the European countries will allow to reduce the number of recognized agricultural entities in 9 times.

Conclusions

When classifying farms only legal peculiarities of their registration are taken into account but not size of their resources. Among agricultural organizations considered as big ones there are many farms which are family farms and don't have important benefices, surfaces or herds. Very often farms belonging to the small business produce more products than agricultural organisations. In the same time, many households produce more products than farms in their region.

We consider that in order to realize an efficient State support of agricultural production and to enhance its role in rural development it is necessary to define indices and levels of output threshold for obtaining the status of agricultural producer. The level of revenue obtained from the sale of agricultural products including associated goods, which is equal to minimum salary per every member

of household, is an important index for definition of agricultural producer status. According to our estimations this parameter can be achieved by households having more than 5 ha of agricultural lands or 3 and more conventional heads of agricultural animals.

We need special researches for the definition of agricultural producers' types in Ukraine basing on traditional methods that take into account not only legal status but also resource and economic characteristics of farms. Before last census in Ukraine these researches were impossible as the base characterizing the totality of producers was absent.

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Received: 24.05.2017

Reviewed: 16.06.2017

Accepted to publishing: 23.06.2017

**EMPLOYMENT UNSHADOWING IN THE SYSTEM OF STATE
REGULATION OF THE LABOR MARKET**

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Abstract. *The basic aspects of employment unshadowing are exposed in the article, that in a complex with a pension and will give an opportunity to get a positive effect other reforms, as a key to filling of budget is legalization of salaries and workplaces. The basic parameters of "shadow" employment are outlined, the basic problems of forming of the civilized labour market and directions of their decision are certain in relation to legalization of shadow employment.*

Keywords: *shadow employment, labour market, unshadowing, legalization, remuneration of labour, pension, social guarantees.*

JEL Classification: **J06, J30, J38**

In the structural economic restructuring context, the formation of the civilized labor market, the output from the «shadow» of employees and employers part that use illegal labor forces, avoid paying taxes and a single social contribution to the budgets of particular importance.

«Shady» employment adversely affects the state programs implementation and is directed against a person, deprives him of social, pension and medical support.

The most common form of illegal employment is the workforce retention without the agreements' conclusion between individual entrepreneurs and employees that are stipulated by the current legislation, makes the employee a kind of slave of the employer, since the employee is usually working for 10-12 hours a day, often deprived of full-value days off and payments on hospital sheets, and the size of his future pension is under big question.

But the problem here is not only in light-fingered employers, but also in the fact that some employees think that work in the «shadow» is acceptable for themselves. Some people are attracted to the fact that earnings are not taxed and thus are higher, others like the simplified procedure for recruitment: not competitive selection, no tax declarations, even a work book is usually not required. Illegal employment, tax evasion revolves around the budget impoverishment, extremely restricts the state's ability to increase wages, pensions, allowances for disabled people, orphans, other socially vulnerable groups of the population

At present, it is extremely important that every citizen should clearly understand that the main reason for the future meager pension is his current illegal work capacity and the «gray» salary. Thanks to the unshadowing in combination with pension and other reforms, it will be possible to get a positive effect, since the key of budget filling is the legalization of salaries and jobs. Illegal work and salary «in the envelope» is a direct way to old age in poverty. The explanation is simple: the deductions' absence to social insurance funds is, in the future, the minimum pension.

The «shadow» sector legalization can be the important means of overcoming crisis phenomena in the economy and related problems. Therefore, it is necessary to realize the honest work advantages and prospects, legal and civilized relations in the field of employment.

Employment unshadowing with payment of wages «in envelopes» is an urgent problem in Ukraine. It is known that in Ukraine there are 26 million citizens of working age and 12 million

pensioners, which can be considered a normal ratio. Of these 26 million able-bodied employees (hired employees and entrepreneurs) 16 million and 2 million unemployed. The other 8 million are probably in the shadow sector or on earnings abroad. At the same time with 16 million working people only 10.5 million. pay ERUs.

The positive effect has already reduced the ERU rate to 22% from 2016. and the minimum wage growth has doubled since 2017. So, according to preliminary calculations of the Ministry of Economic Development and Trade of Ukraine for 9 months. 2016, the shadow economy level in Ukraine amounted to 35% of the official GDP, which is 5%. less than the corresponding period of 2015[1].

In 2016 based on the control and verification work results of the State Tax Service of Khmelnitskyi Region, 64 payers of business activity revealed payment of wages and other income in violation of the tax legislation requirements.

Based on the results of the conducted inspections, unscrupulous taxpayers were credited with over 6,000,000 hryven of personal income tax and nearly 900,000 hryven of a single social contribution, of which the budget was received 1.2 million hryvnen. At the same time, 1098 citizens were identified, who were not registered in accordance with the requirements of the legislation by employers. Based on the results of the corresponding control and verification measures, 575 individuals were involved in state registration as subjects of entrepreneurial activity.

For today in the region the single algorithm is implemented with the authorities' participation, socially responsible business and the public on incomes' legalization and ensuring compliance of taxpayers with tax legislation requirements, identification of business entities that carry out entrepreneurial activities without state registration, and attracting unrecorded and hidden incomes of individuals to taxation.

The cornerstone of this process was financial burden reduction on the payroll. Therefore, in the future, the legal impact on the labor legalization and the prevention of payment of wages «in envelopes» will only increase [2].

For the process effectiveness of economy transparency, the processes of business unshadowing (including combating evasion / taxation optimization at the level of small and large businesses) and combating corruption at the state and local levels of government must take place in parallel. For example, the possibilities' narrowing for applying the simplified taxation system coincided with the control strengthening of transfer pricing, and therefore did not cause significant censures.

On the other hand, the electronic declaration introduction is not enough two «waves». Prospective for expanding the tax base is a one-time implementation of so-called «zero» declaration of citizens' property status with the subsequent application of indirect methods for estimating income and expenses. However, such a step should be accompanied by successful results of the state anti-corruption policy.

Pursuant to the Order of the Cabinet of Ministers of Ukraine from 02.03.2010, № 359, according to the Plan of Measures for the unshadowing of Income and Relations in the Field of Population Employment [3], according to the amended legislation, the issues of monitoring compliance about labor and employment lies on executive bodies of city councils, cities' regional significance and joint territorial communities, in accordance with the procedure established by legislation.

At the same time, State Labour Service continues to control the issues of legalization of wages and population employment. So, the Department of the State Labour Service in Khmelnitskyi region, on the information basis, which was received from the bodies of the Pension Fund, inspections of contracts concluded with employees to comply with the requirements of labor legislation will be carried out. The positive effect should stimulate employers to create new jobs by compensating part of the actual costs, associated with paying the single fee for compulsory state social insurance.

We agree with the need proposal at the legislative level, the approach change to the various social payments (subsidies) principles, and above all a shift in focus to the social guarantees implementation for the formally employed citizens who fill the state budget and all funds, and thus evening-out dependent moods other unemployed people (employed in the informal sphere) which

makes maximum use of material resources and social benefits to the greater extent than those citizens, who fill the country's budget

It should be implemented every citizen duty, which is laid down in art. 67 of the Constitution of Ukraine on the payment of taxes and fees [4].

Employers, on the other hand, must take gradual steps to increase the wages' level, in particular, ensuring the implementation of the norm, the minimum salary is the lower limit of remuneration of labor for performing simple unskilled work, and with increasing requirements for the employee qualification or the work complexity, wages must grow proportionally.

It is necessary to introduce a system of effective adult education, and the basis for acquiring a profession / specialty should be dual education, which involves the active participation of the employer in the training of personnel. It is time to solve the problem of medium and long-term labor market forecasting, the rigid mechanisms introduction for the shadow employment legalization and wages' payment «in envelopes» [5].

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Received: 30.05.2017

Reviewed: 15.06.2017

Accepted to publishing: 23.06.2017

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Times New Roman, 10 pt, normal	Times New Roman, 10 pt, normal	Times New Roman, 10 pt, normal

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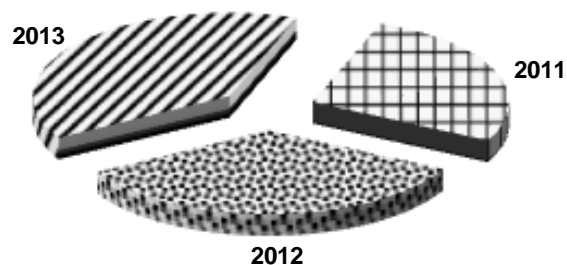


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**The Scientific Journal
of Cahul “Bogdan Petriceicu Hasdeu” State University
(semestrial edition)
Economic and Engineering Studies**

Cahul “Bogdan Petriceicu Hasdeu” State University,
Piața Independenței 1, Cahul,
MD-3909, Republic of Moldova
Tel: +373 299 22481;
Fax: +373 299 2 47 52;
E-mail: journal.ees@usch.md

Good for printing: 26.06.2017

Format: 21,0 cm x 29,7 cm
Printing sheets: 9,06
Edition: 120 ex.
Printed by: “CentroGrafic” SRL, Cahul
Tel. +373 299 25949

**The Scientific Journal of Cahul „Bogdan Petriceicu Hasdeu”
State University: Economic and Engineering Studies -
ISSN 2587-313X**



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<http://www.usch.md/economic-engineering-studies/> -
E-ISSN 2587-3121**

