

## Conceptual Bases of Development of the Integration Environment of Agrarian and Industrial Complex

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Doi:10.5901/mjss.2015.v6n3s7p253

### Abstract

Due to the complication of agrarian and industrial complex, functioning of various forms and strengthening of influence of integration on its prospects there is necessity of studying of problems of development of its integration environment, a need of definition of its role for overcoming of this crisis phenomena in agrarian sector and a need of justification of concepts of its further development. On the basis of the results of the analysis we can mark transformational structures of agrarian and industrial complex, also we can prove an application of differential and integration theory in studying of development of the integration sphere of the agrosphere, we can define its structure, elements, and factors causing its state.

**Keywords:** agro-industrial complex, development, the integration sphere, postulates and factors of formation of the integration sphere, transformation, macro - and a microsphere, the social and economic relations.

### 1. Introduction

Market transformations in the economy of Russia caused high-quality changes in development of the agrarian sphere, it activated integration processes and caused necessity of studying of problems of development of its integration environment and definition of its role for overcoming of the crisis phenomena for agrarian and industrial complex.

### 2. Results and Discussions

In the history of the European and concrete scientific thought this concept was revealed as the formulation of the general universal law of the development which can be based on two fundamental principles – differentiation and integration (Chuprikova, 2009). From the point of view of philosophy, development is the directed natural process, there are some changes of structure of the developing objects and their new qualities appear. But now considering L. von Bertalanfi's formulation (Bertalanfi, 1975) it becomes clearer, what details the development orientation has, its natural character and how new qualities can appear in the developing systems.

Thus, on the basis of the general universal law of development an integration of five massifs of theoretical representations and the facts can be possible:

1. Theoretical and philosophical ideas of existence of the general, universal law of development of difficult systems and principles of development – differentiation and integration;
2. Substantiation of the universal differential integration law of development in economy;
3. A number of large economic theories where the law of development from the general to the particular, from whole to parts and the principles of differentiation and integration act as leading and fundamental;
4. Number of particular theoretical generalizations of the actual experimental data on process of development of separate economic processes and functions;
5. The actual results of many researches of development of the most different economic processes and functions which were received within various theoretical approaches (Chuprikova, 2009).

It leads to the conclusion that in economy there are all prerequisites for a formulation of differential and integration theory of development of the integration sphere. This theory was included in a universal interdisciplinary system and evolutionary paradigm of modern science.

Integration transfers interaction of elements of system to new level, it gives an opportunity for effective management of reproduction processes. Actualite of a problem is caused by need of studying of impact of integration processes on the social and economic relations in agrarian sector. Being historically certain form of nationalization of production integration develops within the influence of various characteristics of system (institutional, technological, social, etc.), it defines necessity of a combination of system, institutional and integration approaches.

The amalgamation of earlier independent, separately functioning subjects, in the uniform formation (system) formed as a result of their integration creates opportunities (material, financial, etc.) for the fastest universal introduction of achievements of scientific and technical progress, increase of level of social and economic efficiency of the agrarian sphere. Value of integration amplifies, when the isolated organizations, especially in crisis and post-crisis conditions, can't provide expanded reproduction in necessary scales and up to standard.

Development of the agrarian sphere is based on qualitative and quantitative characteristics of its integration sphere representing dialectic unity of the spatial and subject and social components which are closely connected between themselves and interdependent. And development of the integration sphere can be defined both quality of its spatial and subject contents, and quality of the social and economic relations in it, and also quality of communications between its elements. Therefore there is a number of problems of conceptual character, moreover there is no concrete definition of the concept "integration sphere", due understanding of a role, value, prospects, intensity and the level of its development, interconditionality and necessary quantity of its elements in agrarian sector. All these things can cause discussion. Studying of various forms of integration demands the concrete theory and model analysis meaning a formulation of recommendations about improvement of state regulation of integration processes in agrarian and industrial complex.

The development of problems of improvement and operation of mechanisms of realization of the social and economic relations in the conditions of development of the integration environment and tendencies of modern economy lags behind requirements of practice considerably.

Integration into agrarian and industrial complex is studied by the scientific organizations and certain researchers for a long time, confirming that in domestic agrarian economic science its specific direction takes a big part: the theory and methodology of integration. Nevertheless, even organizationally issued integrated formations can seldom function as complete reproduction systems where the participants are focused on the final results and continuous growth of efficiency of joint activity.

The analysis of scientific works of the domestic scientists-economists and also works of foreign researchers testifies to the lack of a consensus on interpretation of the concept "integration sphere", moreover there is no concrete definition of it. Scientific L. Bertalanfi, M. I. Setrov, O. R. Lange, I.I. Shmalgauzen, Yu.I. Chernyak, I.V. Blauberg, R. L. Akoff [Definition of "system" of [http://fpi-kubagro .ru/opredeleniya-ponyatiya-sistema/](http://fpi-kubagro.ru/opredeleniya-ponyatiya-sistema/). 27.02.2015] and others gave reasonable definitions of concept "system".

At the same time, there is a concept as an environment of system. According to Yu.P. Surmin's opinion, the environment of system is a number of systems which doesn't belong to this one, but they relate with it and have influence on it [Surmin Yu.P.]. In various subject domains different approaches to understanding of the term "environment" were accepted, but it is possible to allocate four main concepts of an environment:

- noise, chaos (on the one hand noise and chaos prevent system to live, but on the other hand they act as a source of influences for it. In this case the system appears as the center of organization which main task is to keep itself). It is rather simple concept, because it doesn't consider the organization of an environment;
- the factored environment (the environment contains the objects and the phenomena differing in organization. Thus the factors surrounding system act as active reasons influencing on a system and forcing it to adapt to themselves. In relation to other systems this system is also represented as such factor or it can be a part of some integrated factor);
- set of equivalent systems (systems compete with this system, exchange resources with it, trying to survive in this fight with the aid of permission of contradictions in own favor. It can resemble to the description of the same systems);
- an over system (relationship between system and an environment-over system can be build by the principle of the hierarchical and organizational. Environment-over system tries to bring system element into organizational and functional accord to the nature, and this one, in its turn, tries to keep independence and to increase number of degrees of freedom).

Each of the provided concepts reflects a certain aspect, as a result the environment of system represents some unity of disorder processes, organized factors and systems, and also inclusions of this system in over system . The environment influences on system surely. Being in an environment, the system experiences continuous influences – factors (Surmin, 2003).

As a synonym of the concept "environment" people use the term "Sphere, according to this definition (external environment) (Lopatnikov, 2003) is a thing that surrounds system and influences on it. Differentiation of system and sphere is always conditional practically, it can be defined by a condition of the solved task. Forms of connection of this system with the environment surrounding it are various. In models of cybernetic systems influence of the environment is described by uncontrollable variables, but among them it is necessary to distinguish controllable and really uncontrollable. Therefore it is more correctly not to speak about the impact of the environment on system, but to speak about their interaction. The system not only forms and shows the properties in the process of this interaction, but it also actively influence on sphere. Other systems (over system or supersystems) can be environment for system also. Thus, the agrarian sphere representing difficult system, solving the arising problems, structurally changes it (unites, divided) and interacts with others, sometimes it interacts with diverse elements of the integration environment and forms new and more difficult system with a set of restrictions and opportunities for achievement of the purpose.

Integration models of the environment of various spheres including agrarian, assume a combination of factors of dynamics and change along with factors of stability and balance in organizational behavior. Besides integration approach expands concept of the organizational phenomenon towards movement of levels of creation of the theory of development of the environment.

According to basic provisions of integration approach formation of the integration environment is based on the following postulates:

- sphere is formed as reaction to requirements (economic, social, political, etc.);
- process of formation can be systematic, or spontaneous, formal or informal, but anyway it has to be legitimate that changes were perceived by environment.

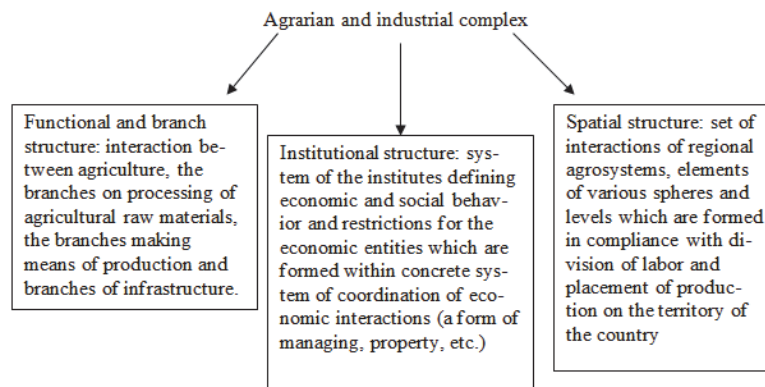
The condition of the environment can be caused: various factors (organizational, social and economic, etc.) can characterize and be one of parameters of a state and behavior of system therefore the behavior of separate elements and their groups influence on organizational functioning; the type of behavior of system and its participants, and also the relation between them define its development; adaptation of behavior of elements of system (branches, complexes, the organizations, etc.) is carried out by the management, communication, decision-making, control; Owing to flexibility of information system there is a possibility of control over all positions of elements of system, preventing risks that gives the chance to use the potential of everything for development of system. Therefore development of agrarian and industrial complex as difficult system and its integration environment can be proved by the following statements:

1. Forces of organizational growth and development are concentrated either on internal characteristics of the system, or on organizational climate of the integration environment;
2. Dynamics of growth and development of system is the regularity proceeding from the nature of system and relationship with the integration environment;
3. Efficiency of functioning of system and duration of its existence depend and on type of the relations and interaction of its participating elements;
4. The functioning system is able to change its functions and to correct activity for satisfaction of the arising requirements of an environment;
5. The system is characterized by the functioning duration as its exits provide possibility of emergence of necessary entrances and some others.

Efficiency of functioning of agro-industrial complex as diversified subsystem of economy depends on structure of production and balance of resource streams of various spheres, forming the social and economic space representing the environment which has the integrated structure, characterizing interaction of various branches and spheres, and their elements, different stages of production and distribution of a product. Interaction as process of mutual influence of separate objects at each other conducts to transformation of their state and system in general, including to emergence of the mechanism of animation.

Development of the agrarian sphere happens in a difficult network of interactions of various spheres and branches, it is impossible to understand all their set by the method of simple summation. Transformational processes of the last years defined quantitative and high-quality changes in agrarian and industrial complex of the country, defining its structure which is characterized by dynamics of proportions and system of interactions, fig. 1. (White L.L., 2012).

The agro-industrial complex develops and increase of level of its competitiveness is connected with the policy of structural transformations representing strategy of creation of certain economic, social and institutional proportions, and also an intensification of interaction of interindustry formations and elements of other spheres who form a complex. The functional and branch structure is formed in a final result of the big specific weight of internal consumption in primary branches of agrarian and industrial complex, low marketability of products of agriculture.



**Picture 1.** Transformational structures of agrarian and industrial complex

Therefore this type of structure is focused on consumption of the main part of products in not processed type and it is characteristic for the countries with undeveloped interindustry communications, low level of development of the overworking sphere closed by a subsistence economy. The institutional structure was allocated in the conditions of development of the market relations and had some essential changes. Relevance of spatial aspect at research of development of interactions in the agrarian sphere is caused by a variety of the climatic, social and economic and institutional factors with their influences, and in some cases defining, efficiency of functioning of a complex, assuming intensive barter by various types of food production, rational placement of agrarian production on territories of the country, formation of large specialized zones on production and processing of agricultural raw materials, association of efforts for scientific and technical, technological, personnel, financial, administrative providing agrarian and industrial complex, formation taking into account these changes of the all-Russian market. Realization of these allocated tasks is possible on the basis of use not only inter industry approach to regulation of agrarian and industrial complex of the country and regions, but also development of interaction of various fields of activity, that is development of his integration environment creating operating conditions of the agrarian sphere.

Thus the integration environment of the agrarian sphere can be divided into macroenvironment (external) and a microenvironment (internal).

In a macroenvironment of agrarian and industrial complex it is possible to allocate seven basic elements: the natural and demographic environment, and also an economic situation, a political situation, welfare, legal and technological spheres, and also the institutional environment which environment factors affect:

- direct influence: the changes in the standard and legal sphere regulating functioning of agrarian and industrial complex; actions of authorities of the state and local self-government; tax policy; interaction with economic entities and partners;
- indirect influence: a political situation, an economic situation in the government. economic situation of a sphere of activity, branch and etc, international situation and events, natural disasters.

The microenvironment represents the environment of the immediate environment presented by the factors which are directly influencing activity of system in which it is possible to allocate the following functional spheres of activity. Production sphere: it covers different stages of process of production(supply, actually production, exchange processes (cooperation), sale). Administrative sphere:it includes functions and phases of an administrative cycle (planning, operational management), control. The innovative-financial sphere including problems of innovations, scientific and technical progress, crediting. Now we can notice special value of development of small and medium business (business) in the village which can be allocated with separate sector.

Thus macro - and microenvironment influence on enterprise activity differently. Social legal relations, relationship with labor unions are a part of the social sphere. It is also possible to allocate the sphere of formation of personnel potential, preparation and retraining of personnel.

Macroenvironment defines those conditions and factors, to which agrarian and industrial complex as a system, should adapt. On the one hand it creates the general conditions for functioning of system, on the other hand – it defines a framework of the right, social economic behavior, admissible and inadmissible limits for it in the course of activity. Microenvironment is presented by the factors influencing on the agrarian sphere and operated by it, so microenvironment

is controlled environment. Therefore: if agrarian and industrial complex adapts to action of the specified factors at the macrolevel, there is their transformation at the microlevel.

Macroenvironment of any spheres of activity is formed by the government. But inspite of the opinion of some economists Russia is at a stage of the developed market, it is possible to mark out the features inherent in economy of the countries with transitional economy. It is possible to carry the following statements to them: the government imposes taxes, establishes interest rates, often changing them in correlation to the economic situation, constraining special economic measures, actively is engaged in working off of legislative acts, forming the economic, political, legal conditions defining functioning of agrarian and industrial complex.

The natural and demographic environment makes direct impact on creation of branch specialization, placement of the enterprises for regions, formation of costs of production, possibilities of use of labor as it is characterized by a geographical arrangement, climatic conditions, quality of lands, a source of raw materials, number and gender and age structure of the population. The agrarian sphere of Russia functions generally in the conditions of a frigid climate that sharply increases the level of costs of production and affects the level of competitiveness of production. Risk agriculture breaks stability of functioning of business in agriculture.

The economic environment provides the economic freedom which is the sign defining as it is not only opportunity to be engaged in a concrete kind of activity, but also access to resources and markets. Thus the components forming the economic environment are development of the markets, level of the scientific competition, stability of monetary system, level of the income and nature of their distribution. Thus as an important component the behavior model of economic entities acts. In Russia economic activity was historically formed as whole, including both economic, and not economic acts.

The political situation as environment element, causes social integration of the agrarian sphere in system of a social system and its ideology, thus it is characterized by stability of political institutes, the developing relations of society and government, ways of management and adoption of decisions.

The welfare sphere includes ethical and moral standards of behavior, educational level and religious views of the population, mentality, those are the factors. These factors have impact on specifics of a certain sphere of activity, on formation of requirements and feature of demand.

The infrastructure environment is characterized by existence of the developed bank system and the adjusted insurance business, channels of supply and sale, a network of the market intermediaries including consulting, legal, advertizing, transport and other organizations, and also means of communication and information support. Developments the infrastructure environment promotes strengthening of intensity of goods exchange operations, expansion of opportunities of formation of enterprise structures.

Creation of the right sphere defining the legal environment is the most important and responsible component of agrarian system and also defines by such parameters as legislative base of economic activity of the organizations regulating their relationship, legislative protection of business, nature of the regulating intervention of the government providing freedom of activity of economic entities, and also level of its adaptability.

The scientific and technical environment is characterized by the level of industrial development of the country, scientific and technical achievements in the sphere of creation and use of innovative technologies and the progressive equipment; level of development of science and equipment. The scientific and technical environment, existing scientific and technical potential promote formation of nature of production, and also ways of business activity that is especially actual for the agrarian sphere now.

### **3. Conclusions**

Thus, proceeding from the considered theoretical provisions it is possible to make a conclusion that:

- application of the differential integration theory in studying of development of the integration environment of the agrarian sphere allows to generalize and to systematize a large number of the facts and regularities relating to development of the most different economic processes and functions represented separated and not connected among themselves and confirms the universality and the practical importance;
- development of the agrarian sphere, increase of its social and economic efficiency can be carried out only by means of development of the integration environment and improvement of the integrated formations from various spheres created on a basis of centralization of the purposes and interests taking into account their specific features.

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