

## Globalization determinants of raw materials markets development\*

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**ABSTRACT.** The determinants of development of raw materials markets and the peculiarities of their formation in the terms of world economy globalization have been researched. The empirical base of research is the agricultural food market as one of the most important bases in the sphere of material production and provision of food security of the country. The important social and economic mission of the agricultural sector has been highlighted, along with the export competitiveness and import dependence of agricultural food products in the international trade. The imperative norms have been substantiated and conclusions have been drawn regarding the establishment of respective conditions for the operation of globally integrated markets in Ukraine.

**KEYWORDS:** globalization, global economy, global agricultural food market, competitive advantages, agriculture.

### Introduction

The leading integrating element of the global economic system is the global market and its structural and branch segments. The global market operates according to the principles and laws based on the international productive specialization of countries, considering their economic and natural potentials, capacity of the global market and conditions of hyper-competition. The current global economic system is denoted by a complex structure, globalization of economic life, appearance of significant number of superpower institutional organizations with unified mechanisms of administration and regulation, acceleration of scientific and technical changes, intellectualization and informational support of the global economy, standardization of quality of goods and services, liberalization of trade, increase of the number of international economic relations bodies and political, social and economic transnational networks, globalization of demand and offer, polarization of development of states and communities. Globalization of agricultural food markets and the effect of external competitive environment become determinative for economic entities, and global interdependence and complementarity of all sectors of national economies

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transforms social and political, organizational and economic, informational and technological, ecological and resource terms of development of countries. According to the neoliberal theory, the modern capitalism acts as a globalization driver.

A lot of works by national scientists, such as Ya. Bazylyuk<sup>2</sup>, O. Bilorus<sup>3</sup>, V. Vlasov<sup>4</sup>, D. Lukiyanyenko<sup>5</sup>, Yu. Pakhomov<sup>6</sup>, S. Sokolenko<sup>7</sup>, O. Shvydanenko<sup>8</sup> etc., have been dedicated to the matters of establishment of the global model of development, effect of globalization of the economy upon structuring and transformation of market relations, determination of areas, prospects and directions of adaptation of Ukraine to these processes. The problems of development of food product markets have also been researched by V. Andriychuk<sup>9</sup>, P. Sabluk<sup>10</sup>, S. Maystro<sup>11</sup> and others. The base of their works consists of matters of market formation and improvement of the economic mechanism of its operation. Along with this, the problems of establishment of a market of competitive agricultural food products and development of agricultural branches in the terms of globalization of economy are still not explored and substantiated enough, and they do not reflect the synthesis of interests of global economy entities, especially those in the sector aspect. *The purpose of the research* is theoretical, methodological and practical substantiation of globalization determinants of development of the agricultural food market and development of top priority trends of national strategy implementation. *The object of the research* is the process of operation of entities and objects of agricultural food market and adaptation of national agricultural manufacturers to the terms of globalized world economy. *The subject of the research* is the aggregate of theoretical, methodological

<sup>2</sup> Bazylyuk Ya. Competitiveness of national economy: essence and terms of security: a monograph / Bazylyuk Ya. — K.: NISD, 2002. — 132 p.

<sup>3</sup> Bilorus O. Imperatives of strategy of development of Ukraine in terms of globalization / Bilorus O. // Economy of Ukraine. — 2001. — № 11. — p. 17–21.

<sup>4</sup> Vlasov V. Globalization and global food problem / V. Vlasov // Economy of Agricultural and Industrial Complex. — 2004. — No. 1. — p. 7–11.

Vlasov V. Globalization and globalistics: history, theory, practice, personas [text]: [in 3 volumes] / Vlasov V. — K.: NNC «IAE», 2011. — 530 p.

<sup>5</sup> Globalization and safety of development: a monograph / Bilorus O., Lukiyanyenko D. et al ; director and scientific editor O. Bilorus. — K.: Kyiv National Economic University (KNEU), 2001. — 733 p.

<sup>6</sup> Pakhomov Yu. National economies in global competitive environment / Pakhomov Yu., Lukiyanyenko D., Gubskiy B.. — K.: Ukraine, 1997. — 237 p.

<sup>7</sup> Sokolenko S. Clusters in global economy / Sokolenko S. — K.: Logos, 2004. — 848 p.

<sup>8</sup> Shvydanenko O. Global competitiveness: theoretical and applied aspects: a monograph / Shvydanenko O. — K.: Kyiv National Economic University (KNEU), 2007. — 312 p.

<sup>9</sup> Andriychuk V. Capitalization of agriculture: condition and economic regulation of development: a monograph / Andriychuk V. — Nizhyn: Aspect-Poligraph LLC, 2007. — 216 p.

<sup>10</sup> Sabluk P. Globalization and food products / Sabluk P., Bilorus O., Vlasov V. — K.: NNC IAE, 2008. — 632 p.

<sup>11</sup> Maystro S. National agricultural market in terms of globalization: mechanism of state regulation: a monograph / Maystro S. — Kharkiv: Publishing House of Kharkiv Regional Institute of State Administration «Magistr», 2009. — 240 p.

and practical aspects of formation of agricultural food market and development of the mechanism of adaptation of economic entities to the terms of global economy. *The scientific hypothesis* of the research is based on the assumption that the adaptation of national agricultural entities of the market to the terms of global economy should be built on their gradual introduction into the system of global market relations, formation and implementation of their stable competitive advantages on the principles of adaptation and integration of the sector into the global market system, with the simultaneous institutional support of agricultural branches which would facilitate the solution of a number of acute problems of the agricultural sector and agricultural territories.

Methodological support of research is based on the principles of unity of theory and practice and systemic and synergetic approach, which considers the development of agricultural sector branches from the positions of holistic paradigm and in the context of concept of its multifunctional development with simultaneous consideration of close interrelation between economic and organizational, social and political and ecological and natural factors and priorities. Using this approach, the main problems of development of the branch have been identified, being considered from the point of view of integrity of the object, the subject and the environment, purposes, methods and means of management. The methodology of systemic approach has allowed detection of problematic aspects of the branch operation and components of formation of agricultural food market at all levels (functional, empirical, methodological and institutional), while being on a certain level of abstraction.

### **Globalization Determinants of Market Development**

As a result of globalization, the economy becomes a unified integral multi-level system, both functionally and institutionally structured, the elements of which become a global network of complementary, interdependent, economically and politically integrated national economies which undergo asymmetrical development. Systematization of research regarding the phenomenon of globalization allows distinguishing three conceptually opposite positions regarding the perception of globalization, namely hyper-globalism (apologetic), transformationalism (rationalistic), alter-globalism (antiglobalizational). The plurality, multi-aspect variety and mixed structure of the process of globalization stipulate the variety of views regarding its definition, chronological concretization, successfulness and effect upon the society in whole and economic entities in particular. One should agree with the research which denote opposing manifestation of globalization.

The consequences of global transformations cause a direct effect upon Ukraine as well. The data of the Anti-Crisis Research

Center<sup>12</sup> are very disconsolate, confirming that Ukraine acted as one of the best economically developed countries in Europe and the world in the period of market transformation. The country with such potential was bound to become especially attractive for both domestic and foreign investors. But, since the time of restoration of independence in 1991, the economical policy of Ukraine has devaluated all the competitive advantages of the country. Within 20 years, the state has practically lost its investing attractiveness. Former Socialistic states of Europe which entered the period of market reforms along with Ukraine have leapt forward in their development dynamics so far that now they seem to be out of reach. Nevertheless, in the last years, there has been an even more alarming trend: Ukraine is gradually transforming into an economic outsider even within CIS limits. Moldova, Tadjikistan, Kyrgyzstan and Belarus have outrun Ukraine.

The data on the level of globalization of countries<sup>13</sup> за by two most famous KOF systems, developed by Swiss Institute of Business Research (Konjunkturforschungsstel der ETH Zurich)<sup>14</sup>, and CEIP, used by the international organization of Carnegie Endowment for International Peace<sup>15</sup>, prove the integration of Ukraine into the global economy and direct connection of the national economy to the modern global processes. Foreign specialists and national entrepreneurs distinguish three blocks of problems in Ukraine<sup>16</sup>. After generalizing and adapting the results of research, one can say that one of the largest problems of engaging foreign investments and integrating the agricultural food products market of Ukraine into the global relations system is *weak domestic institutional environment*, manifested in the weakness of the legal system, the absence of the system of protection of fundamental private property right, obstacles at market entry and market exit, complexity of bankruptcy procedure, deficit of trust between the economic system bodies, low efficiency of antimonopoly regulation and low level of business culture between counteragents. *The regulative obstacles* which take the form of extreme regulation and bureaucracy in the establishment and maintenance of business, application of administrative pressure upon the business, high time

<sup>12</sup> Effect of globalization transformations upon the economy of Ukraine [Electronic resource]. — Access mode: <http://www.anticrisis.kiev.ua>

<sup>13</sup> Kupchak P. Effect of globalization and integration processes upon the development of national economy / Kupchak P. [Electronic resource]. — Access mode: <http://www.nbuv.gov.ua/e-journals/NacGosp/2009/Kupchak.pdf>.

<sup>14</sup> GlobalIndex A Multidimensional Globalization Measurement of the University of Bamberg and the TransEurope research network [Electronic resource]. — Access mode: <http://www2.warwick.ac.uk/fac/soc/csgr/index/>

<sup>15</sup> The Centre for the Study of Globalisation and Regionalisation [Electronic resource]. — Access mode: <http://www2.warwick.ac.uk/fac/soc/csgr/index/>

<sup>16</sup> Moldovan O. Ukraine: an outsider with tremendous potential / Moldovan O. [Electronic resource]. — Access mode: <http://www.epravda.com.ua/publications/2011/08/23/295840/>.

and financial expenditures and their non-transparency take their toll. In 2010, the economic activity in Ukraine was controlled by 79 agencies – the largest number of regulative bodies within the CIS countries. In Moldova, these functions are performed by 56 bodies, in Belarus – 40 bodies, in Kazakhstan – 30 bodies. The third block of problems *of the fiscal environment is related to the taxation system deficiencies*: high income tax load, asymmetrical distribution of social security obligations between the employee and the employer, imperfect administration of taxes, as well as problems of business communication with taxation agencies, especially in the regions.

In the conditions of globalization, the main task is to fight for comprehensive operation in the long-term perspective, minimization of financial and economic, social and demographic, political and ecological risks with the simultaneous preservation and formation of competitive advantages which are able to secure further development and adaptation of business entities to global economy, as well as to ensure competitiveness of our own national economic system and its components – regional economies represented by all the market agents.

### **Problems of Establishment and Operation of Agricultural Food Markets in terms of Globalization Challenges**

Under the conditions when the global economy becomes more and more trans-nationalized, it is necessary to preserve the national material production and enhance historically established strategic branches which are traditional for the national economies, to enhance their export-oriented vector of development. Despite the top priority of intellectual and informational, innovative and financial spheres of business entities development in the conditions of global transformation of economy, the agricultural sector remains a sufficiently important branch of material production. It is this sector that must become the catalyst of social, ecological and economic development of Ukraine, which is able to ensure food security of the country, profitable operation of all market relations bodies (manufacturers of products and the state) at the expect of export-oriented branches of agriculture, while being in the conditions of globalization and ripening of global food crisis. It is possible if the agricultural and industrial products of domestic manufactures are in demand at the domestic and foreign markets, meet the international safety and quality standards of food products, and also stay within the limits of acceptable price range for the consumers. The majority of problems concern the urgent need to make the agriculture more environmentally friendly, which would ensure stable development of agricultural territories, facilitating

rehabilitation of the nation and preservation of natural resources for the future generations.

A number of important macroeconomic parameters confirm the significance of this branch in the economy of the country, among which the most important is the share of agriculture in the gross value added (GVA)<sup>17</sup>. In 1990, this share made 24.4 %, in 2001 – 16.3 %, in 2004 – 11.9 %, in 2007 – 7.5 %, in 2010 – 8.7 %, and 2011 – 9.6 %<sup>18</sup>. The decrease of branch contribution into the formation of GVA could be explained, first of all, by the price disparity for industrial and agricultural products. The importance of this branch is confirmed by the fact that in 2012 the villagers of Ukraine made 14.3 million persons, or 31.2 % of the total population number<sup>19</sup>. 15.5 % of all employed persons are working in the agricultural sphere, compared to 2.5-5.5 % of those employed in the economically developed countries. The top priority of development of this branch and village territories is conditioned by its strategic importance regarding the provision for food and energy security of the country, weighty participation in the establishment of gross value added, and an important role in the social and ecological spheres. Globalization changes cause a direct effect upon the agriculture which is still at the stage of deep structural transformation affected by geopolitical, geo-economical, geo-social and geo-ecological factors, which, in their turn, influence and determine the peculiarities of the agricultural food products market.

The agricultural sector is known to be the most vulnerable and supported branch of the economy of any country, regardless of the level of its social and economic development.

As a rule, the processes of changes or transformation are considered in the context of theory and practice of development of social and economic systems. Development is a pluralistic phenomenon by a set of possible manifestations, and its uniformity, advancing movement and determination are uncertain. Any economic system is driven towards development by the binary contrast of interests of business entities which is present in such a system, and for which the form of violated symmetry is characteristic. The latter materializes in the difference of potentials of economic system elements, forming the potential of the necessary tension which becomes the source of development of this system<sup>20</sup>. In the research, market globalization is suggested for understanding as the process of union of historically separate and non-equal national markets into a single complex space, and production

<sup>17</sup> In the Statistical Annual Directory of Ukraine, gross value added is provided jointly for the agriculture, hunting economy and forestry (the share of agriculture is dominating).

<sup>18</sup> The Statistical Annual Directory of Ukraine for 2011: collection of statistics / edited by O. Osaulenko. — K.: State Statistics Committee of Ukraine, 2012. — 559 p.

<sup>19</sup> Ukraine in Figures 2011: collection of statistics / edited by O. Osaulenko. — K.: State Statistics Committee of Ukraine, 2012. — 251 p.

<sup>20</sup> Kostyuk V. Changing systems / Kostyuk V. — M.: Nauka Publishing House, 1993. — 352 p.

globalization shall be understood as the domination of trends to production of goods (services) in the specified territories in the planetary scale, in which the optimal number of competitive advantages is concentrated maximally regarding quality and quantity terms. Methodological approaches to the diagnostics of applied aspects and substantiation of theoretical aspects of the specified processes are based on the modern paradigm of global competition. The market shows a bright reflection of availability of competitive advantages of business entities and the level of their competitiveness<sup>21</sup>. The global market can be determined as a self-reproductive mechanism of balancing the global demand and global offer<sup>22</sup>. As a result of market globalization, the role of the state is transformed, leading to appearance of super-power institutes and institutions which determine the rules of global market operation.

From the methodological point of view, studying the globalization effect upon the formation and development of agricultural food product markets, it is necessary to consider «the multifunctional nature» of the agriculture not only under the position of product manufacturing in vegetation and cattle breeding, but also from a wider point of view, considering social and ecological aspects. The multi-functionality is the part of agricultural policy of stable development of developed industrial countries of the world. The functions of agriculture, according to the concept of multifunctionality, are reduced to economic function (products manufacturing), social function (development of village territories) and ecological function (preservation and use of natural resources). Their achievements ensure innovative (selection and genetic developments and research) and informational components (timely provision of information for administrative decision-making)<sup>23</sup>.

From the point of view of economic theory, the notion of «multi-functionality» is somewhat contradictory. First of all, it concerns external positive, negative or neutral effect of agriculture upon the economic activity of economic entities and the problem of calculation of results of its economic activity. Besides, some positive external effects which are created by specific types of economic activities can be classified as social welfare. Social welfare has three main characteristics: 1) they do not take part in competition (i.e. consumption of social advantages by one person does not impede consumption of the same advantages by another person); 2) they «cannot be rejected» (i.e. people cannot refrain from con-

<sup>21</sup> Yatsenko O. Methodological instruments of multifunctional competitiveness evaluation (on the example of agriculture) / Olga Yatsenko // USA: The Advanced Science. — 2011. — November. — p. 30–35.

<sup>22</sup> Shvydanenko O. Global competitiveness: theoretical and applied aspects: a monograph / Shvydanenko O. — K.: KNEU, 2007. — 312 p.

<sup>23</sup> Kryladykh E. Agricultural aspects of WTO membership for CIS countries / Kryladykh E., Strokova O. — M.: Encyclopaedia of Russian villages, 2002. — p. 162–164.

sumption of social advantages even if they want to); 3) social advantages are «not exhaustive» (i.e. access to them cannot be restricted). The main feature of social welfare is that it is not engaged in the market mechanism as regular commodities. The notion of multi-functionality of the agricultural sector has a long history. Article 33.2 of the European Union Treaty states, «At elaboration of the unified agricultural policy and special methods of its application, the following shall be taken into account: a) a peculiar nature of agricultural activity which arises from the social structure of agriculture, as well as from the structural and natural non-equality of various agricultural regions; b) the need of gradual performance of certain transformations; c) close connection of agriculture of the Member States to other sectors of economy». Nevertheless, the WTO members have taken two opposite positions in this matter. The countries with the highest level of state expenditures for the support of agricultural manufacturers usually stand for the idea of multifunctional agricultural sphere, which is related to the measures of «yellow basket» of trade regulation. Such countries include the EU, Japan, South Korea, Switzerland and Norway. Their opponents are the USA and the Cairns Group countries.

Disputes regarding the term of «multi-functionality» arise in connection with various interpretations of the text of Agriculture Economy Agreement (Article 20). This Article (named «Continuation of Reformation Process») notes the following, «With the understanding of the fact that there is a long-term goal to achieve significant gradual reductions of the level of support and protectionism, which lead to fundamental transformations, the members decide that the negotiations which continue this process shall take place one year before the end of the implementation period, taking into account the experience accumulated till the given moment in the process of implementation of obligations regarding reduction of support, the effect caused by implementation of obligations upon the global agricultural trade, non-trade aspects, the special and differentiated regime approved for the developing countries — the WTO members, and the task of establishment of a fair and market-oriented system of agricultural trade, as well as other tasks and problems mentioned in the Preamble of the given Agreement; what further obligations are necessary to achieve the above-mentioned long-term goals.» Thus, the idea of a special nature of the agricultural economy, which is supposedly different from other economy sectors, flows through the whole European agricultural policy.

The preconditions of establishment of global agricultural products market prearrange the aims, methods of management, strategy and tactics, marketing tools, competitive behavior and logic of agricultural business at a certain market segment. The global hyper-



competition stipulates the need to apply qualitatively new approaches and methods of business, which often encourages export-oriented business entities to establish global organizational structures on cooperative basis. The result of such actions is the appearance of global economic institutions which have a determinant effect at the global market.

Application of interdisciplinary approach to the research, consideration of the specifics and peculiarities of operation of the global market allowed formulation of a uniquely designed definition of this notion, which, unlike the traditional approach, takes into account the existence of a system of institutes and institutions at the international market which operate in the spheres of production, distribution and consumption according to the laws of commodity manufacturing, monetary flow and ecologically balanced development<sup>24</sup> (annex 1).

Ukraine can find its own place in the international distribution of labour and integrate into the global community only on the basis of establishment of a highly-developed export agricultural complex which would conform to the requirements of modern global market. The implementation of this strategic aim requires numerous resources, first of all, foreign currency investments. Low international competitiveness of domestic goods and services restricts the volumes of incoming investments in the country quite notably. So, there is an urgent need to improve the resource potential of the country, especially its export component, taking into account the obvious and dormant competitive advantages of business entities.

### **Methodical Peculiarities of Determination of Competitive Advantages of Agricultural Products in the Global Trade System**

Achievement of high qualitative and quantitative results of business is possible on condition of ensuring competitive advantages of bodies and objects of the agricultural sector, which in their turn became dynamic and stopped being static. Theoretical provisions of concepts of formation of competitive advantages are reduced mainly to three basic types: market, resource and institutional provisions. The respective paradigm is acceptable for the agricultural sector as well, because it is one of the leading system-forming elements of the economy.

The research methodology of competitive advantages, competitiveness, competitive positions of manufacturing countries, international specialization of trade shall include the aggregate of general

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<sup>24</sup> Yatsenko O. Imperatives of globalization of agricultural product markets / Yatsenko O. // Scientific Journal of East-European National University named after Lesya Ukrainka. Series «Economic Sciences». — 2013. — No. 4 (253). — p. 27 — 39.

and special methods of establishment of parameters, structure and other characteristics of researched objects and their interrelations. The competitiveness of agricultural raw materials and food products at the global agricultural food markets shall be determined by the correlation of export and global prices to a certain limit. At that, the value of simultaneous usage of export and import shall increase at calculation of competitiveness, considering the increase of intra-industry trade. This research centers around the methods which are based on neoclassic and modern theories of international trade.

The neoclassic theory explains the regional specialization with the help of comparative advantages which are possessed by a certain region or a country<sup>25</sup>. According to the theory of comparative expenses of D. Ricardo, the specified advantages are formed in the country as a result of differences between the level of labour efficiency or, according to the theory of production factors correlation (Heckscher-Ohlin model), are established as a result of differences in the provision of production factors and natural resources. The neoclassic theory is based on stable production volumes, rates of homogenous product trade and also stipulates the existence of free competition.

The high level of intra-industry trade and trade between relatively similar countries led to the development of the so-called modern theory of international trade. The intra-industry trade is characteristic for the countries and branches which have growing production scales, monopolistic competition, differentiation of products and relatively even provisions of production factors<sup>26</sup>.

The competition at the global agricultural food market intensifies the attention to the problem of international competitiveness of agricultural sectors of individual countries, especially this problem is actual in the context of economy globalization. To determine competitiveness, indices of intra-industry trade are used (ex-post) and cross-industry trade (ex-ante). Regarding the first group of indices, the international specialization, dynamics of foreign trade turnover of agricultural and food products of individual countries enables us to compare one nominal sector to another from different manufacturing countries. As competitiveness is a relative category, the indices based on absolute values, such as market share, export volume etc., provide too little information about the competitive position of a certain branch or commodity in the national economy. The indices based on comparison of nominal sectors of national economies are more informative. Among these

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<sup>25</sup> Krugman P. *Miedzynarodowe Stosunki Gospodarcze* / P. Krugman, M. Obstfeld // PWN. — Warszawa, 2003. — P. 65–73.

<sup>26</sup> Cieslik A. *Nowa Teoria Handlu Zagranicznego w Swietle Badan Empirycznych* / A. Cieslik. — Warszawa, 2000. — P. 101–113.

indices which are most often used by the foreign scientists, the following should be pointed out: RCA (Relative Comparative Advantage Index), RXA (Relative Export Advantage Index), RMP (Relative Import Penetration Index), RTA (Relative Trade Advantage Index) and RSCA. With this purpose, empirical methods are used to assess the comparative advantage indices, such as RCA, RTA, RXA and RMP, which are based on the classical B. Balassa index and RSCA index, which is a symmetrical transformation of RCA<sup>27</sup>, <sup>28</sup>.

The available indices of international competitiveness of agricultural production can be united into two groups depending on the methodology of their calculation. The first group includes indices which allow determination of competitiveness of food products and agricultural raw materials of a certain country or its sector in whole at the global market in the past and are based on the use of statistical data regarding the value of foreign trade by individual types of products. The second group includes indices based on comparison of production expenses for individual types of products. It should be noted that the Organization of Economic Cooperation and Development (OECD) recommends using the RSCA index to assess the specialization of international trade and the GL index for cross-industry trade<sup>29</sup> (annex 2).

So, the scientific and theoretical, methodological, institutional and regulative and applied principles of research of agricultural food markets are formed in the context of modern global economic processes and require consideration of effect of the brand new globalization factors. The modern methodological tools mostly serve as a basis for short-term and middle-term forecasts, which do not always take into account the cyclic development of economy, periodical financial crises, real and dormant natural and economic potentials, possibilities and threats of the global environment, as well as strengths and weaknesses of the national economic systems and their structural elements with consideration of specific industry characteristics.

Special role in the theory and practice of market globalization is given to the formation and development of competitive advantages, competition in all its manifestations and at all its levels, especially in the context of transnational and integration preconditions which have both quantitative and qualitative characteristics with consideration of industry specifics. The quantitative signs of market globalization include market capacity, share in the global

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<sup>27</sup> Balassa B. Trade liberalization and Reveal Comparative Advantage / B. Balassa // Manchester School of Economic and Social Studies. — 1965. — Vol. 33. — P. 99–123.

<sup>28</sup> Hinloopen J. On the Empirical Distribution of the Balassa Index / J. Hinloopen, J. Marrewijk // W.P. Erasmus University. — Rotterdam, 2000. — P. 79.

<sup>29</sup> Iapadre L. A Taxonomy of Statistical Indicators for the Analysis of International Trade and Production / L. Iapadre ; OECD. — Paris, 2003. — P. 49–56.

export, market structuring, foreign trade volume, direct and portfolio foreign investments, rates of GDP and GNP growth, number of market relations bodies – economic, political, social institutions, intensiveness of competition and competitive positions of the leading market participants, number of servicing infrastructure objects etc., and the qualitative signs include processes of regionalization, relation to international institutions etc.

The research of agricultural markets in the conditions of economy globalization shall be based on theoretical and methodological concepts of substantiation of national market development strategy in whole and in sector markets in particular, with consideration of multilevel integration complicated by the growing interdependency of national economies, threats of the global business environment, global risks in the context of social and political, ecological and economic dimension, with consideration of hyper-competition. The essence of economic diagnostics of agricultural food markets in the context of their globalization shall be reduced to a priori and a posteriori analyses of preconditions and peculiarities of formation and operation of markets, the normative and legal sphere, market environment, mental peculiarities and social and cultural level of consumers with the respective segmentation, determination of ecological and resource peculiarities, organizational, business etc. The architectonics of the step-by-step process of research is reduced to establishment of purpose and task, specification of tasks; determination of subjects and objects of research; substantiation of methodological basis of research: its category apparatus, system of methods and models; determination of information sources: official, profile and non-profile, statistical data and data of monitoring of leading organizations, empirical personal research of global and domestic scientists, substantiation of theoretical and applied trends and vectors of development.

### **Modern Condition and Competitiveness of Domestic Products at Global Agricultural Food Market**

In the terms of global trade system, entry into the international market can occur only on condition of competitiveness of national products which is achieved by availability of competitive advantages. Achievement and implementation of the latter shall become especially important in the terms of modern economic globalization. The task is to determine the available competitive advantages, spheres and branches where they are manifested in the most complete form, as well as their development and establishment of new advantages. Ukraine possesses sufficiently important advantages of natural and productive nature, which forms the basis for an optimistic assessment of results of entry of Ukraine into the

global economic space. Along with this, practice confirms that success at the international markets is mostly achieved by countries which supply products with a significant value added share. The trade on the second and, namely, on the third tier of the global markets is not only beneficial but also promising. Ukraine trades mostly on the lower tier (with minor exceptions), facing threats of fluctuation of demand and prices and deterioration of trading conditions. Nevertheless, Ukraine already occupies a weighty position in the world by such indices as tillage area – 2.1 % of the total global rate and production of individual types of products, besides, the share of village population of Ukraine is 0.8 % (Table 1).

**Table 1. Share of Agricultural Manufacture of Products of Ukraine in General Global Rates, 2011**

Index	Specific gravity, %
Production:	
Grain crops	2.1
Including wheat	4.2
Sugar beet	5.9
Sunflower	18.3
Potatoes	6.2
Meat of all types (in slaughtering weight)	0.7
Milk	2.4
Eggs	1.3
Sunflower oil	12.2

*Source:* calculated according to the FAOSTAT data<sup>30</sup>

Assuming these conditions for a start, the country should aspire to «refinement» of commodity structure of foreign trade both in export and import. This can be achieved only by establishment and development of export potential. It is about export-oriented branches and industries which are competitive at foreign markets and able to ensure both proper volumes of export and progressive goods-wise structure. They form the original export sector, the establishment and successful operation of which requires special public custody, like in many developed countries of the world. Theory and practice confirm the important role of export in securing the economic interests of the country. Export is by right considered an important factor of economic growth. For many post-war environ-

<sup>30</sup> According to FAO data [Electronic resource]. — Access mode: <http://faostat.fao.org/site/339/default.aspx>

ment countries, activation and rationalization of export has become an important expansion of development and improvement of welfare<sup>31</sup>. In the terms of globalization of agricultural food markets, it is necessary to determine the list of strategic industries of agriculture and perform enhanced diagnostics of their condition and respective segments with the purpose of maximal adaptation to competitive conditions of external environment and creation of global products. FAO (Food and Agriculture Organization of UNO) composes the annual Top-20 rating of the most important food and agricultural products for every country; for Ukraine, the given top-5 rating includes milk, wheat, sunflower, chicken meat and potatoes (table 2).

The industrial approach to business still dominates in the domestic agriculture. We agree with Professor T. Dudar, who believes that «the psychology of manufacturer when a company director only thinks of how to produce the goods and not of how and where to sell them is still strong in many agricultural and agricultural and industrial formations»<sup>32</sup>.

*Table 2. Production of 20 Most Important Food and Agricultural Commodities<sup>33</sup> (Ranked by Value) in Ukraine According to FAO Data, 2011*

Rank	Commodity	Production	
		Million USD	Thousand tons
1	Cow milk (fresh)	2872.2	10804.0
2	Wheat	2428.1	22323.6
3	Sunflower seeds	2328.5	8670.5
4	Chicken meat	1282.0	900.1
5	Potatoes	1149.5	24248.0
6	Large cattle meat	1077.6	398.9
7	Pork	1073.6	698.4
8	Chicken eggs	868.5	1064.2
9	Tomatoes	780.4	2111.6
10	Corn	699.4	22837.9

<sup>31</sup> Anilovska G. State factor of transformations in transitional economies: a monograph / Anilovska G. — Lviv: LKA Publishing House, 2002. — 324 p.

<sup>32</sup> Dudar T. Organizational and economic principles of formation and development of agricultural marketing system / Dudar T. // Economy of Agricultural and Industrial Complex. — 2005. — No. 10. — P. 89–96.

<sup>33</sup> For the year 2011

Rank	Commodity	Production	
		Million USD	Thousand tons
11	Barley	440.0	9097.7
12	Apples	390.8	954.1
13	Sugar beet	371.0	18740.0
14	Rape	358.7	1437.5
15	Grapes	298.3	521.9
16	Onions	246.8	1174.9
17	Carrots and turnips	195.7	864.2
18	Cucumbers and gherkins	191.8	966.0
19	Soya beans	188.6	2264.4
20	Natural honey	176.4	70.3

Source: according to FAOSTAT 34 data

The characteristic feature of agricultural food market is not just the productive concept of economy, but also disproportion of development of demand and offer. In such conditions, elaboration of economic mechanism of formation and provision for efficient operation of the market of agricultural products and raw materials become especially important. The characteristic features of the market stipulate the need to use specific and specialized marketing tools, in other words, application of agricultural marketing.

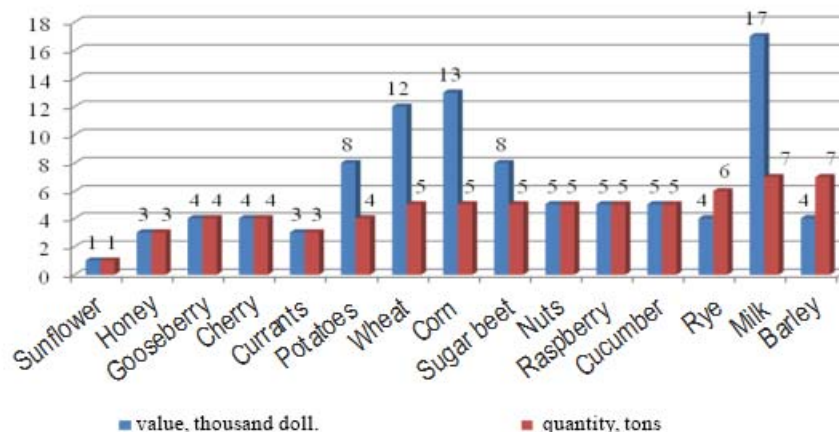
We share the opinion of O. Shvydanenko who states that the status of the country and other operating bodies at the global market depends on their competitiveness which is characterized by shares in the global demand and global offer<sup>35</sup>. Personal generalizations of research in the given direction allow suggestion of definition which conforms to modern approaches and teachings. We suggest interpreting the global agricultural food product as an aggregate of parametric characteristics of products of a certain industry, with consideration of peculiarities of the country of origin which are unified and standardized, and also conform to the global needs of consumers.

Ukraine is integrated into the global market, and right now its offer of global agricultural food products consists of over twenty commodity items, but the raw material products still prevail,

<sup>34</sup> Production of the 20 most important food and agricultural commodities (ranked by value) in a given country for the year indicated ) [Electronic resource]. — Access mode: <http://faostat.fao.org/site/339/default.aspx>

<sup>35</sup> Shvydanenko O. Preconditions of security of competitiveness of the country in the context of progressive globalization trends / Shvydanenko O. // Formation of market relations in Ukraine: a collection of scientific articles. — 2007. — Issue. 3 (70). — P. 43–51.

which is confirmed by the FAOSTAT statistical data<sup>36</sup> (figure 1). In such conditions, the problem of formation of competitive advantages of agricultural entities and development of competitive relations in the context of European integration trends and enhancement of integration ties of Ukraine becomes especially relevant.



Source: based on the data of FAOSTAT, 2011.<sup>37</sup>

**Fig. 1. Position of Ukraine at the Global Market among Other Manufacturers of Agricultural Products**

The result of severe competition in the global terms is the optimal distribution of resources, detection of the most promising business entities, their efficient operation and satisfaction of consumer demand. The domestic consumer market of agricultural products and raw materials is developing actively and represented in a wide range of products. But, to enable Ukraine to obtain positive effects and ensure long-term comparative advantages, it needs to possess efficient market economy, the operation of which requires formation of the necessary market environment without which a civilized market (first of all, agricultural market) is impossible.

As we can see on the figure, the leading position at the global market is taken by such domestic agricultural products as sunflower, natural honey, berries, sugar beet, rye, barley etc. In this context, it would be interesting to assess competitiveness of the given products with the help of calculation of relative competitiveness indices (table 3).

<sup>36</sup> FAOSTAT statistical data [Electronic resource]. — Access mode: <http://faostat.fao.org/site/339/default.aspx>.

<sup>37</sup> Country rank in the world, by commodity [Electronic resource]. — Access mode: <http://faostat.fao.org/site/339/default.aspx>



**Table 3. Comparative Characteristics of Relative Competitive Advantage Indices of Individual Commodity Groups of Agricultural Products of Ukraine**  
(according to international trade classifier – code SITC 061)

Commodity group	Year	Index value					Availability of competitive advantage*
		RXA	RMP	RTA	RSCA	GL	
Sun-flower	2007	10.903	6.276	4.627	0.832	0.501	+
	2008	0.375	4.980	-4.604	-0.454	1.018	-
	2009	0.237	3.865	-3.627	-0.616	-	-
	2010	7.421	6.149	1.272	0.762	-	+
Natural honey	2007	0.880	0.004	0.876	-0.064	0.005	+/-
	2008	0.628	0.052	0.577	-0.228	0.078	+/-
	2009	1.365	0.014	1.351	0.154	0.009	+
	2010	1.468	0.057	1.412	0.190	0.038	+
Wheat	2007	0.875	0.010	0.865	-0.067	0.014	+/-
	2008	3.592	0.006	3.585	0.564	0.002	+
	2009	5.785	0.004	5.781	0.705	0.001	+
	2010	3.374	0.007	3.366	0.543	0.002	+
Cow milk (fresh)	2007	0.092	0.045	0.047	-0.832	0.406	-
	2008	0.276	0.017	0.258	-0.568	0.406	-
	2009	0.305	0.006	0.299	-0.533	0.406	-
	2010	0.342	0.018	0.325	-0.490	0.406	-
Sugar beet	2007	-	4.409	-4.409	-1.000	2.000	-
	2008	0.192	-	0.192	-0.678	2.000	-
	2009	0.009	-	0.009	-0.982	2.000	-
	2010	-	-	-	-1.000	2.000	-

Source: calculated according to FAOSTAT data.

\*1) (+) – stable competitive advantages; 2) (+/-) – relative competitive advantages; 3) (-) – absent competitive advantages.

By analyzing index values we can draw the conclusion that, despite the leading position of Ukraine at the global market among the manufacturers of individual types of agricultural products, not all commodity groups are competitive. This is caused by the effect of a number of exogenous and endogenous factors. For instance, low competitiveness of domestic sugar beet at the global agricultural food market can be explained by intensive intra-industry trade of the specified products, as the GL index was above 1 and made up 2,000 during the whole period of observation. Similar situation is noted in the milk commodity group which is charac-

terized by increased intensity of intra-industry trade. This is also confirmed by negative value of symmetric RSCA index.

Quite the opposite situation is noted in other commodity groups, which are characterized by significant competitive advantages at the global agricultural food market. First of all, it concerns sunflower and wheat.

The RXA indices of sunflower in 2007 and 2010, as well as wheat indices in 2008-2010 were above 1, which affirms export specialization of the country in the given types of products regardless of the crisis and post-crisis periods, which directly affected all the agriculture branches. The bee-keeping economy is characterized by a lower competitive level, which can be explained by reduction of export deliveries of honey to the global market in 2007-2008, which had been caused by drought and year of bad crops. The RMP index (relative import dependency) of almost all commodity groups, except for sunflower, shows the absence of competitive disadvantages and demonstrates low dependency on global import of agricultural products, which, in its turn, is also a confirmation of comparative competitive advantages.

By summarizing the results of the research, several conclusions can be drawn. These trends affirm the absence of dependency of Ukraine on the structure of respective foreign markets, on the one hand, and also show the need to grow the potential of export-capable agricultural branches with the simultaneous geographical diversification of target markets, on the other hand.

### **Vector of Agricultural Sector Development in Conditions of Enhancement of Globalization Trends**

The strategy of development of Ukrainian economy shall be aimed not at «dissolution» of its achievements in the global transnational formations, but at consolidation of the national economy as an integral and self-sufficient element in the system of global economic ties. The Ukrainian agriculture will be able to compete successfully against the European agricultural sector only if Ukraine and domestic agricultural entities treat the agricultural economy like the market which is able and must provide profits, possess a powerful export component and act as a source of foreign currency investments.

The modern condition of domestic agricultural market is characterized by imperfection of basic institutions of market economy, low competitiveness of agricultural commodity groups, insufficient development of market business infrastructure, low rates of internal economic transformations, negative effect of political instability upon the dynamics of engagement of foreign investments. The following measures on development of agricultural business could facilitate partial resolution of the specified problems: formation of

market infrastructure, state support of export-generating branches, multiplication of the most promising branches of global agricultural economy branches, namely, organic food industry, formation of agricultural corporations and clusters, exploration and use of tools and strategies of global marketing, structuring and balancing of export classification of agricultural food products, preservation and enhancement of competitive positions at global markets with simultaneous growth of competitiveness of food products at the expense of increase of their quality and safety, phyto-sanitary control and certification, technical and technological modernization, informational and intellectual support of agricultural production, establishment of favourable innovative investment preconditions for agricultural economy, acceleration of integration of the national agricultural sector in the global economic area with the purpose of using the advantages of globalization and simultaneous protection of national interests etc. The specified methodological peculiarities of globalization of agricultural food markets form the base for the establishment and appearance of real, dormant, potential and future perspectives of the agricultural sector of the Ukrainian economy.

The operation of national markets occurs in the terms of liberalization of international ties. This requires accelerated formation of full-fledged national agricultural market able to ensure balance between demand and offer, increase profitability of enterprises and solvency of consumers, as well as to accelerate the development of agricultural territories. The process of formation of national agricultural market is still at the establishing stage, that's why it secures only partial fulfillment of its functions and tasks. The market deficiencies should be neutralized by measures of governmental economic and social policy<sup>38</sup>.

The major part of developed countries is in the process of transition from traditional agricultural economy to the modern concept of its development — agricultural business. Powerful international agricultural business corporations are established. Transnational companies operate not only within the economically developed countries, but also in the countries with developing economy. Ukraine also takes part in the globalization processes, as many transnational companies operate in many sectors of the national economy. For instance, such globally acknowledged international companies as WJ Grain LTD, Cargill, Bunge Limited etc. operate within the agricultural industrial complex<sup>39</sup>.

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<sup>38</sup> Maystro S. National agricultural market in the terms of globalization: mechanism of governmental regulation: a monograph / Maystro S. — Kharkiv: Publishing House of Kharkiv Regional Institute of State Governance «Magistr», 2009. — 240 p.

<sup>39</sup> Berenstein B. Exchange market in the context of globalization phenomena of international economy / Berenstein B., Tretyak O. [Electronic resource]. — Access mode: **Ошибка! Недопустимый объект гиперссылки...**

Globalization of stock markets which facilitate more efficient operation of international financial, commodity and currency markets, providing for the needs of international trade participants, act as an important catalyst of world market development. With the access to international exchange markets, transnational companies and other international trade participants expand their activities and use respective exchange market mechanisms and tools which facilitate growth of profitability. On opinion of specialists, regional markets which are not integrated into international exchange markets impede development of national economy. Regional exchange markets are not competitive without integration into international markets, as the investors and issuers search for more favourable terms, high liquidity and financial guarantees when they choose the market where they will perform their operations. International exchange markets make it possible for their participants to trade in a wide range of assets with minimal expenses and maximal efficiency. Exchange trade has changed greatly at the expense of use of fixed exchange contracts (derivatives), introduction of exchange clearing procedures and application of new informational technologies.

The main driving force at introduction of this or that exchange mechanism and tool is the aspiration of various market participants for obtaining protection of their economic interests and transparent and efficient pricing mechanisms<sup>40</sup>. The specified exchange tools and mechanisms have been operating at the global markets for a long time, but they are not used in Ukraine. Nevertheless, as experts say, according to the current legislation of Ukraine, it is impossible to establish universal exchange markets in Ukraine as commodity exchanges can perform operations with commodity assets, and stock exchanges and currency exchanges perform their operations only at a stock exchange or a currency markets. Versatility of the exchange market of Ukraine would cause positive effects upon the macroeconomic situation in various market segments, facilitate protection of economic interests of the country and integration of domestic exchange market into the international market.

Today, the global environment of post-industrial informational civilization is being formed, in which the role of the main production factor is played by information, and the decisive factor is the new knowledge which are transformed into principally new productive options, accumulating non-stop. The information and knowledge as factors of production are able to overcome relative insufficiency of natural resources, perform fast and efficient ma-

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<sup>40</sup> Berenstein B. Exchange market in the context of globalization phenomena of international economy / Berenstein B., Tretyak O. [Electronic resource]. — Access mode: **Ошибка! Недопустимый объект гиперссылки...**

noeuvres in any spheres of financial and economic activity. That's why the efficiency of agricultural economy and increase of its competitiveness depend on the increase of intellectual capital of the nation. The market offers not just a commodity in kind, but a combined package of goods, services and information as a type of implementation of intellectual skills of an individual. That's why the efficiency of economy and economic growth depend not as much on the trends of material production, but on development of individual skills and abilities. The main trend in the informational technology sphere is the rapid development of the Internet which has established a new sphere of business. For instance, use of e-Commerce covers 80 % of all companies in highly-developed countries, and about 100 % in such countries as Finland, Sweden and Denmark<sup>41</sup>.

At establishment of an electronic market, it is important that all its participants have maximal concern and interest, as the absence of motivation might lead to dysfunction of informational environment. The main trends of introduction of innovations and informational technologies in agricultural economy shall be correct economy, development of electronic commerce, use of Internet services, monitoring of prices, markets, resource flows, introduction of modern informational and communication technologies at the domestic commodity exchange market, informational support of production etc. (Annex 3). There are 4 main groups of electronic commerce bodies: consumers (C-consumer) – natural persons, business organizations (B-business entities), state bodies (G-government, sometimes A-administration) and financial institutions which ensure settlements between other electronic commerce bodies<sup>42</sup>. But financial abilities of the majority of commodity manufacturers in this industry are restricted, that's why it is expedient to establish regional industry clusters for the efficient introduction of innovations and informational technologies.

Clustering of agricultural business is expedient to be performed on the basis of strategic agricultural industrial zones of business: industrial, conventional and organic<sup>43</sup>. At formation of economic clusters in Ukraine, it is necessary to consider risks and problems related to imperfect institutional environment, absence of competitive advantages of various bodies or their weak manifestation, non-conformity of life cycle of a certain cluster and products manufactured excessive localization in the same territory, unfavorable

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<sup>41</sup> Antonyuk L. International competitiveness of countries: theory and mechanism of implementation / Antonyuk L. — K.: KNEU, 2004. — 275 p.

<sup>42</sup> International E-Commerce [Electronic resource]. — Access mode: [http://e-commerce2000.blogspot.com/2011/02/blog-post\\_3442.html](http://e-commerce2000.blogspot.com/2011/02/blog-post_3442.html).

<sup>43</sup> Yatsenko O. Clustering as a strategic trend of formation of competitive advantages of bee-keeping in Ukraine / Yatsenko O. // Journal of Zhytomyr National Agricultural and Ecological University. — 2011. — No. 2 (29), volume 2. — P.194-212.

natural, climatic and geographic factors. But clustering is not an end in itself or a goal for business entities, it is a way to consolidate the existing and dormant competitive advantages and to establish new advantages in the terms of global challenges. In other words, it means tactics which helps achieve the desired long-term results of activity, ensure stable competitive advantages, take a beneficial competitive position in the respective market segments, while resolving problems of social, economic, ecological and territorial nature, increasing incomes to the local budgets through legalization of production and sale operations of business entities.

In the terms of globalization, intellectual support of economy is felt much stronger, along with the rapid rates of technology modernization, diversity of production and product ranges, differentiation of agricultural markets and methods of production. Enhancement of non-price competition promotes intellect, ability, knowledge, talent and professionalism. The modern globalized economy requires the use of materialized knowledge in the production process and growth of their share in the total value of companies.

The majority of researchers underline that, to make economy operate more efficiently, it is necessary to establish five main types of capital, such as social, financial, natural resources, physical and human stock; the importance of the first type grew significantly in the end of the 20<sup>th</sup> — beginning of the 21<sup>st</sup> century.<sup>44, 45, 46, 47, 48</sup>. The researchers have established that social ties and trust play an important role in the support of economic development, i.e. the social capital level is one of the main factors which influence the economic development of countries, regions and individual enterprises. Usage of social capital in the process of production, correlation of material production in favour of intellectual capital, and the increase of their shares in the total value of enterprises form the value added for the business entities.

Globalization of international economy also expands the problems of social capital as a resource necessary for the increase of economy efficiency, stable development and international safety at micro- and macro-levels. Using the social capital, individuals can get direct access to economic resources, increase their cultural capital through contacting experts and competitive persons who

<sup>44</sup> Bourdieu. P. The forms of capital / P. Bourdieu // Handbook of theory and research for sociology of Education / ed. by J. Richardson. — New York: Greenwood Press, 1986. — P. 21.

<sup>45</sup> Coleman J.S. Social capital in the creation of human capital / J.S. Coleman // American Journal of Sociology. — 1988. — № 94. — P. 95–120.

<sup>46</sup> Paldam Martin. Social Capital: One or Many? Definition and Measurement / Paldam Martin // Journal of Economic Surveys. — 2000. — Vol. 14 (Issue 5). — P. 629–654.

<sup>47</sup> Portes A. Patricia Landolt. The Downside of Social Capital / A. Portes // The American Prospect. — 1996. — 26 May–June. — P. 18–21.

<sup>48</sup> Portes A. Social capital: Its origins and application in modern sociology / A. Portes // Annual Review of Sociology. — 1998. — Vol. 24. — P. 1–24.

embody such cultural capital, join institutions related to assignment and distribution of privileges<sup>49</sup>. It is evident that social capital is one of the most important components of treasures and welfare of countries, regions and individual entities, although it is not a panacea for an efficient economy in terms of globalization.

The following question is still relevant: how does the agricultural production have to be organized with adaptation to the conditions of global food market to provide food for the population of the Earth which keeps growing annually by almost 100 million people, outrunning the capacity of the global agricultural sector. We share the opinions of P. Sabluk who states, «For us, the question is especially important — how could Ukraine, which has a unique agricultural and climatic potential, possessing one third of all black soils of the planet, become an importer of agricultural products and food and spend hundreds of millions of dollars to purchase grain crops? And the main question is: what can be done to change the situation?»<sup>50</sup>.

The current vector of Ukrainian economy development and governmental policy, in contradiction to the current powerful intellectual potential, takes more and more pronounced raw-material nature requiring much labour, which is a potential threat against democratic and economic transformations in the state. The economic growth should be considered through qualitative parameters when the top priority development of intellectual capital and social ties becomes the base of changes not only for the production structure, but also quality of life of the population, including level of income, consumption rates, environmental protection, free time and comprehensive personal development.

Transformation of domestic agricultural sector of the economy lacks socialization, rational labour ethics and responsibility, corporate identity and commitment, and this impedes the formation of relations of trust between the employer and the employee, as well as between business partners inside and outside Ukraine. Deficit of trust of the population in the market institutions of production, consumption, distribution of goods and services acts as an obstacle for social and economic transformations within the state. The notion of social capital in the agricultural sector of economy stipulates existence of institutions, relations and norms which determine quality and quantity of social interactions, and there is more evidence of the fact that social unity is necessary for the economic welfare of the society and stable development of social and eco-

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<sup>49</sup> Yatsenko O. On the Meaning of «Social Capital» Notion / Yatsenko O. // Role of social capital and local initiatives in provision of village development: report of International Symposium (Zhytomyr, May 16–18, 2007). — Zhytomyr: Publishing House of State Agricultural Ecological University, 2007. — P. 59–65.

<sup>50</sup> Sabluk P. Globalization and food products / Sabluk P., Bilorus O., Vlasov V. — K.: NNC IAE, 2008. — 632 p.

conomic processes. The formation and development of social capital at all levels will allow influence upon production factors, reduction of transaction costs of agricultural entities, increase of the level of trust of international institutions in Ukraine. These transformations are confirmed by such progressive forms of business as vertically integrated enterprises and cooperatives. That's why the social capital of Ukraine has to act as one of the strategic resources along with traditional resources, such as raw materials stock, state territory, gold stock and exchange reserve.

### **Conclusions**

The process of globalization of the world economy which has become complementary, interdependent and more integrated has two main components: globalization of markets and globalization of production. The results of world markets globalization include reception of competitive advantages by the countries with higher economic development level, enhancement of destabilization factors, interdependence of national markets, loss of control of peripheral states over their own national markets and appearance of global hyper-competition which is beneficial for the central countries.

In such terms of globalization, the main task is the struggle for full-fledged long-term operation, minimization of financial, economic, social, demographic, political and ecological risks with parallel preservation and establishment of competitive advantages which are able to secure further development and adaptation to the global economy, as well as to ensure competitiveness of national economic system and its components — regional economies represented by all market bodies.

Globalization of agricultural food markets aggravates competition at all hierarchic levels. Methodological aspects of research of agricultural food markets in the terms of economy globalization are based on theoretical and methodological concepts of substantiation of development strategy for the national markets in whole and sector markets in particular, with consideration of multilevel integration complicated by the growing interdependence of national economies, threats from global market situation, global risks in the context of social and political, ecological and economic measures with consideration of competition and multifunctional role of agricultural economy. Integration of the agricultural food sector into the system of world economy occurs in the terms of interaction and interconditionality of national economies, liberalization of international trade which is manifested in the reduction of import fees, reduction of the level of internal support, rejection of export subsidies and hyper-competition. The modern global agricultural food market is characterized by fast industrialization, informational support, capitaliza-



tion, scientific and theoretical development of management and agricultural and green marketing, as well as practical and intensive application of the respective set of tools.

In the terms of globalization of agricultural food markets, it is necessary to determine the list of strategic branches of agriculture and perform diagnostics of their condition and respective segments with the purpose of maximal adaptation to competitive terms of the external environment and establishment of global products. The agricultural industry should be of top priority based on the leading role in securing food safety of the country, its wide consumption base, global nature of offer. Ukraine has preserved the human potential which has respective knowledge, skills and competence.

Ukraine is integrated into the global market, and currently its offer of global agricultural food products comprises more than twenty commodity items, but the dominating share of these commodities is covered by raw materials. Such products include sunflower, honey, barley, potatoes, sugar beet, eggs, wheat and soy.

The imperative norm of development of the domestic agriculture in the terms of global challenges is the formation of civilized agricultural food market and influence of the agricultural activity upon the environment and social development of local village territories. The basis should be intellectual support of agricultural economy, formation of social capital, establishment of a powerful export potential, informational support, clustering and development of agricultural business. Cluster-forming approach shall ensure profitability, competitiveness, investment attractiveness and relative stability of agriculture, on the one hand, and social and economically balanced development of regional territories, on the other hand. The leading role at the current stage of state development belongs to the introduction of electronic commerce, which would enable economic entities to use a number of economic advantages related to information exchange, capital flows, trading, settlements, marketing tools, insurance, which would become the precondition of transition to innovative and informational development platform.

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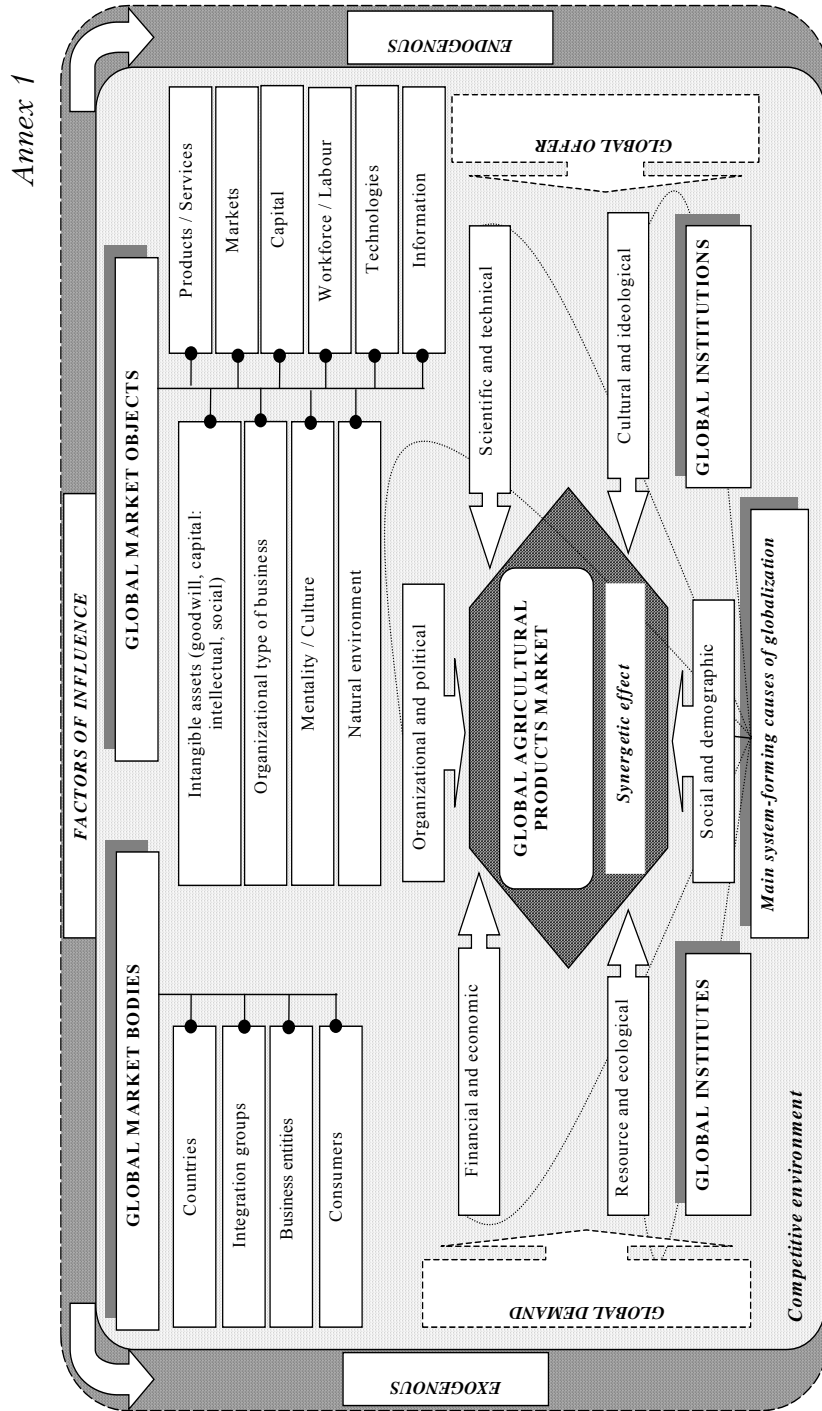


Fig. 1. Configuration of Global Agricultural Products Market

Source: personal research

### Main Indices of Assessment of Country Competitiveness by Commodity Group According to Specialization in International Trade

Index		Formula and value	Interpretation
Relative Comparative Advantage Index	RCA	$RCA = RXA = \frac{X_{ij} / \sum_n X_{nj}}{\sum_k X_{ik} / \sum_n \sum_k X_{nj}}$ <p>RCA and RXA, in essence, describe one process<sup>51, 52</sup> on condition that <math>n \neq i</math>, <math>k \neq j</math>, this restriction discerns this index from RCA, where X – export, i – country, j – commodity, n – aggregate of countries, k – aggregate of commodities. The index value lies within [0; +∞] limits.</p>	<p>The branch the products of which are the export specialty of the country is characterized by value higher than 1, and value between 0 and 1 means absence of advantages. The difference of the RXA index is reduced to the fact that it differs from the original RCA by not considering the same countries and commodities in the numerator and the denominator. The value of the RCA index is supposed to be divided into four groups: A, B, C and D. The A Group (<math>0 &lt; RCA \leq 1</math>) means that the country has no comparative advantages in the foreign economic trade of the given commodities. Other three groups characterize commodities and commodity groups which have comparative advantages. The B Group (<math>1 &lt; RCA \leq 2</math>) commodities have poorly manifested comparative advantages, the C Group (<math>2 &lt; RCA \leq 4</math>) – medium manifestation of comparative advantages, and the D Group (<math>4 &lt; RCA \leq \infty</math>) – significant comparative advantages<sup>53</sup>.</p>
Relative Export Advantage Index	RXA		
Relative Actual Comparative Advantage Index	RCA	$RCA = \frac{(X_{ij} - M_{ij})}{T_{ik} (T_{jw} / T_{kw})}$ <p>where X – export, M – import, i – country, j – commodity, n – aggregate of countries, k – aggregate of commodities W.</p>	<p>This index shows actual comparative advantages of a certain country by a specific commodity group.</p>

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Annex 2

<p>Relative Import Penetration Index</p>	<p>RMP</p>	$RMP = \frac{M_{ij} / \sum_n M_{nj}}{\sum_k M_{ik} / \sum_n \sum_k M_{nk}},$ <p>on condition that <math>n \neq i, k \neq j</math></p>	<p>This index is very similar to RXA, with the only difference that in this case import is considered, marked as M. If the RMP index value is above 1, it means dependency on import is high, in other words, competitive advantages are null. If it's less than 1, dependency is low or comparative competitive advantages are present. But it should be noted that the RMP index is often illusory as its value can be greatly distorted as a result of protection of internal market. If there is an import prohibition or low level of import customs fee, this index will reflect high level of competitive advantages, while the opposite value could be correct and fair. Such a deficiency is characteristic for the RXA as well. If a region serves only as a transit territory for certain types of goods, this index might reflect a high level of competitive advantages, which will be far from truth.</p>
<p>Relative Trade Advantage Index</p>	<p>RTA</p>	$RTA = RXA_{ij} - RMP_{ij},$ <p>where RXA – index of relative export advantage of <math>j</math>-th commodity in <math>i</math>-th country, and RMP – relative import penetration index of <math>j</math>-th commodity in the <math>i</math>-th country.</p>	<p>Positive value of this index shows the relative competitive advantages in the foreign trade, and negative value means relative competitive restrictions. But numerous problems occur at usage of all three indices. Minimal values of RXA and RMP indices are limited to zero, while maximal are not limited at all. The RTA index can be both positive and negative, reflecting presence of absence of competitive advantages; at that, its minimal and maximal values are not limited as well. At the same time, if these indices had threshold values, this would make their interpretation easier, as it would be possible to establish the degree of presence or absence of competitive advantages more accurately in this case.</p>

## Annex 2

Relative Symmetric Comparative Advantage Index	RSCA	$RSCA = (RCA - 1) / (RCA + 1),$	<p>The problem of interpretation of index values is caused by asymmetric nature of indices. That's why, at arithmetical mean value of indices which exceeds its median, distribution of the authenticity density of function is shifted to the right. This means that changes in the sections with large values of RCA would be exaggerated at the analysis of comparative advantage dynamics<sup>54</sup>. To resolve this problem, it is offered to use a symmetric index. Negative values show the absence of advantages, while positive values represent products in which a certain country specializes in foreign trade. The dynamics of comparative advantages is determined with the help of analysis of the RSCA index stability according to the Markov transitive probability matrix<sup>55</sup>.</p>
Competitiveness of Intra-Industry Trade	GL	$GL = 1 - \frac{(X_{ij} - M_{ij})}{(X_{ij} + M_{ij})},$	<p>The GL index (Grubel-Lloyd) is the most commonly used index<sup>56, 57</sup>.</p> <p>The specified index characterizes the intensity of export and import trade in one commodity or commodity group. The index value fluctuates between 0 and 1. If the GL index is equal to 0, this means the existence of only intra-industry trade, and if the index is equal to 1, this means only intra-industry trade in the specified products. Values close to 1 show the increased intensity of intra-industry trade.</p>

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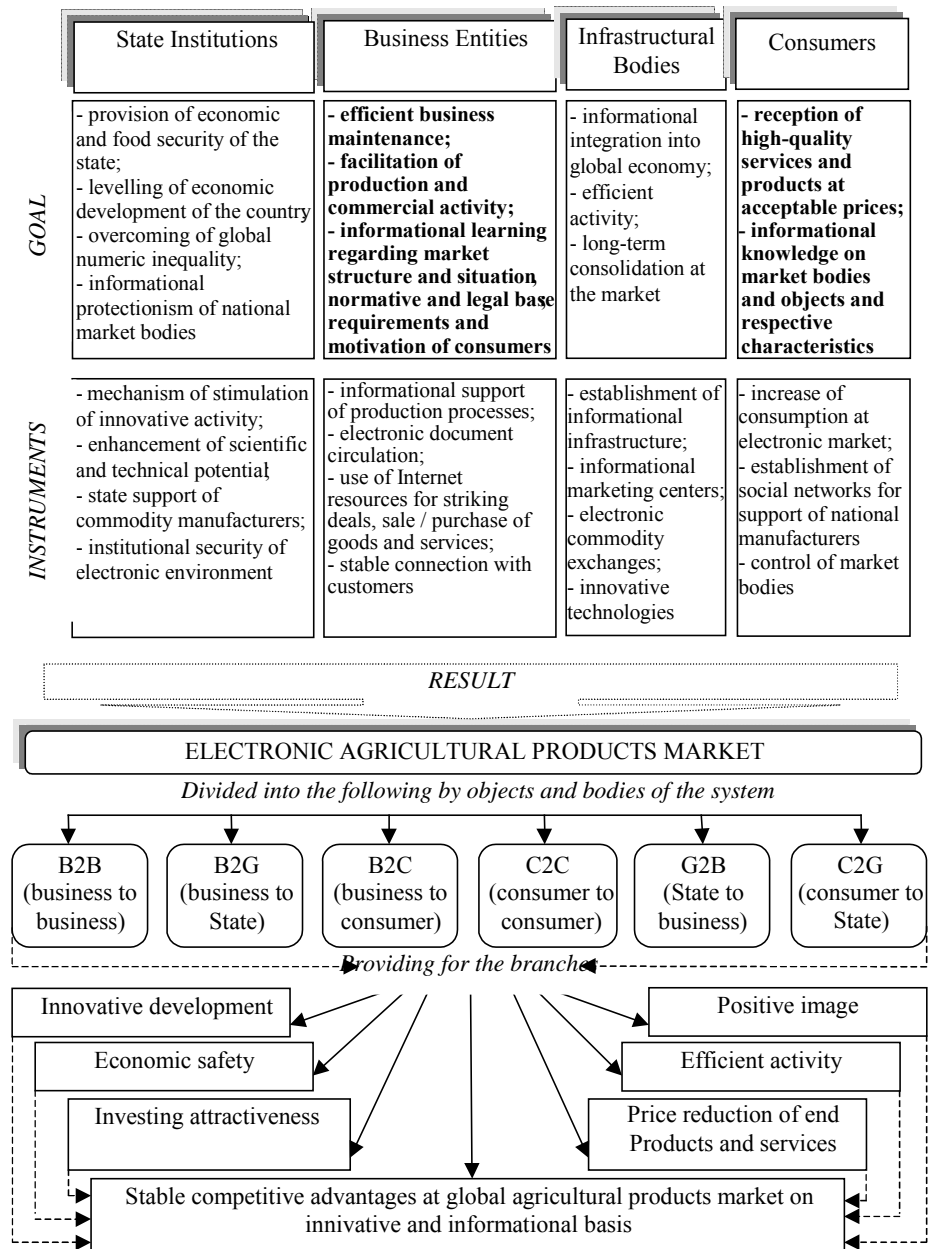
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Annex 3



**Fig. 2. Mechanism of Establishment and Introduction of Innovations and Informational Technologies in Agriculture**

Source: personal research.