GROWTH AND COMPETITIVENESS FACTORS
OF THE AGRI-FOOD SECTOR IN POLAND AND UKRAINE
AGAINST THE BACKGROUND OF GLOBAL TRENDS

Scientific editors:

Tetyana Mostenska
Andrzej Kowalski
Iryna Fedulova
Marek Wigier
Iwona Szczepaniak
Yuriy Bilan

Kyiv-Warsaw 2013

http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html
ФАКТОРЫ РОСТА И КОНКУРЕНТОСПОСОБНОСТИ СЕКТОРА АПК В ПОЛЬШЕ И УКРАИНЕ НА ФОНЕ ГЛОБАЛЬНЫХ ТЕНДЕНЦИЙ

DOl:10.14254/978-83-7867-072-8/2013

http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html
This book is a collective effort of researchers from Poland, Romania and Ukraine a wide representation of European universities and research institutions on the subject of agribusiness economics and agri-food sector development within the European economic area and beyond.

Approved for publishing by the Decision of the Scientific Commission of National University of Food Technologies (Kyiv, Ukraine) of 23 October, 2013 (Protokol No 2).

Official Publisher's Reviewers:

Prof. Dr. Mykola Pugachov (NSC “Institute of agrarian economy”, UAAS, Ukraine)
Prof. Dr. Tetyana Melnyk (Kyiv National University of Trade and Economics, Ukraine)
Prof. Dr Olena Dragan (National University of Food Technologies, Ukraine)
PhD, Associate Prof. Renata Grochowska (Institute of Agricultural and Food Economics – National Research Institute, Poland)
PhD, Associate Prof. Krzysztof Firlej (Cracow University of Economics, Poland)
PhD, Associate Prof. Aleksander Grzelak (University of Economics in Poznan, Poland)

All rights reserved. No part of this book may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.
Chapter 2.

GEOECONOMIC ASPECT OF THE AGRICULTURAL SECTOR’S DEVELOPMENT

Olga Vyshnevskaya

Abstract. The article deals with theoretical and methodological aspects of the agricultural sector development with the influence of geoeconomic factors in order to identify potential benefits and minimize the economic and environmental risks. It is proved that the world globalization flows and processes in the economic, financial, social, environmental and other areas are the benchmarks of any national economy for the future. It is found that neglecting of globalization changes and trends will limit the possibilities of obtaining benefits at the national level. The national economy as a part of the global economic system has activated some elements of an integrated world system, but their development is slow. Therefore, we proved that the negative factors affecting the issue remains unresolved to regulate the internal market, the process of pricing, quality and standards established products as well as slow the integration process, the formation adapted to external conditions organizational and economic structures.

Keywords: globalization, geoeconomic factors, geoeconomic approach, external risks, geoeconomic space.

JEL: L66, P2

Introduction

The relevance of the issue of the agricultural sector’s development is associated not only with providing rural areas with jobs and increase of gross production of certain agricultural products, but also with the necessity of forming a kind of food security of the country and its regions. The implementation of the objectives at the national and regional levels requires from specific economic institutions some new geoeconomic approaches including direct impact of the globalization on all internal processes and phenomena.

The geoeconomic approach is associated with national operating in the geoeconomic space in order to timely respond to the challenges of globalization of the biggest benefits, including economic, food and ecological security. An important aspects are the global geoeconomic factors of influence among which there are financial and information factors, food and environmental security, which are aimed at changing of the internal and external environment of any country. Alignment of those factors or untimely response to the changing of global environment can lead to profound systemic crisis. Particularly acute is the high cost of economic sectors, including agriculture, where the geoeconomic aspects of changing are not only of behavioral and managerial character but also it is carried out with rather negative impact on natural ecosystems, biological characteristics of certain types of natural resources,
PART 4. ENVIRONMENTAL AND ECONOMIC PROBLEMS OF INCREASING AGRICULTURAL SECTOR COMPETITIVENESS

their ability to be healed. The above mentioned effects may provoke acute environmental risks and become a reason of an ecological crisis. It requires a continuous and effective response to the challenges of globalization. Taking into account all the geo-economic aspects of the revised strategy of the economic and its individual sectors justifies the possibility of the effective cooperation at the external level, which is able to provide an opportunity to anticipate and minimize some external risks.

In conditions of the direct impact of globalization processes and phenomena it is necessary to take into account all of them to understand their influence on their world economy, and to develop some new specific sectors of the economy. Operating in the global economic environment under the conditions of globalization changes led to the need to study geo-economic factors on theoretical, methodological and practical points of view.

Dynamic globalization changes are investigated by the national and foreign scientists, who grounds new scientific knowledge that allows exploring the world economy as a kind of synthesis of important areas of human activity in conditions of globalization transformations, identifying its implications and priorities for further development of the international world community. Significant contribution to the development of the scientific knowledge was made by such scientists as Bogaturu O., Buyanov V., Vafina N., Dolgov S., Dumnaya N., Evstigneev V., Zamyatin D., Kolesov V., Kochetov E., Moiseev M., Savchuk V., Sapir E., Sokolov V., Cheshkov M., Yakovets U.

The aim of the research. Taking into consideration all the changes and trends of globalization, the need to identify the benefits of coexistence of individual state systems, the prospects for the further development in order to preserve the natural resource base, raises the need to study geo-economic factors, including the agricultural sector's development on the basis of the territorial features of particular areas.

The aim of our research is to study the theoretical and methodological foundations for the development of the agricultural sector with the influence of geo-economic factors in order to identify potential benefits and minimize the economic and environmental risks.

The need for the research is related to the fact that globalization flows and processes in the economic, financial, social, environmental and other areas are the benchmarks of any national economy for the future. In its turn, the neglect of those trends will limit the possibility of taking advantage of globalization changes at the national level.

The main research task is to identify the major geo-economic aspects of the agricultural sector development in the context of globalization changes and trends.

The research methodology is based on an integrated approach to ground the directions of the agricultural sector with the influence of geo-economic environmental indexes, the impact of globalization changes and trends taking into account some regional characteristics and their impact on natural resources environment in certain areas.

Existing researches and studies of geo-economic aspects are limited by general characteristics of processes and phenomena without specialized features. That is why we are continuing our research to identify the sectoral characteristics and trends under the influence of geo-economic environment.

The main literary sources are the combination of some scientific publications of national and foreign scientists about the origin and components of the geo-economic environment, the peculiarities of different economic systems' development in the context of the globalization processes and phenomena influence.

Essence and features of geo-economic processes and phenomena

The development of the agricultural sector is focused on forming of food base and increasing of an export potential, which is related to the parameters of global economic
development and adaptation to the environmental conditions. The priority indicators while implication and participation in economic geo space are the unity of the global economic system, its integrity, modification or adaptation of individual industries to changes in the geoeconomic space (Vyshnevskaya, 2011).

The unity of the world system provides integrity, the formation processes of which are: internationalization, globalization and mondialization. The internationalization describes the relationship between individual national economies, prompting the development of target specific sectors of the economy to participate in foreign trade. Mondialization characterizes the global economic system that includes not only national economic systems and multinational companies. The process of mondialization is reflected in the growth of the agricultural holding companies’ share in gross of agricultural production and its export. The biggest agricultural holding companies which take about 2.6 million hectares of arable farmland in the possession and use, it is about 6.2% of the total agricultural land of the country are «Ukrlandfarming», «NCH Capital», «Kernel Group», «Mriya», «Mironivskiy Hliboproduct», «Ukrainian Agrarian Investments», «Astarte-Kyiv», «Harveast Holding».

The globalization processes describes not only the interaction of the global economic system with the natural biological environment, but also reflects the integrity of social and natural aspects of the development. The globalization processes stimulate the increase of economic interdependence and relationships, creating economic relationships that ensure the development of certain economic systems with combined interests of society and nature. The quantitative and qualitative features of the global economy are manifested through the diversity of types of economic activity. The transition is accompanied by a movement from structural to non-structural formations, which determines the fundamental basis for the development of off-system integration based on different levels of geoeconomic space from production and finance level to the economic and environmental ones (Kochetov, 2010).

For the development of the agricultural sector the globalization processes and phenomena require weighted actions on national and international levels aimed at protecting of the natural resource base, the formation of conditions for the self-renewal of certain natural resources, which can be achieved only through the activation of "eco-investment" within the framework of existing international programs of the world ecosystems’ conservation.

The agricultural sector due to the close relationship and interdependence with natural resources and their biological features is the most vulnerable because of the reduction of qualitative properties of certain natural resources which is confirmed by the instability of the industry production aspects. For the national agricultural sector the paradoxical fact is that such opportunities of geoeconomic space as clear innovation and technological factors of influence on the development of certain economic systems are unused, The exception is the huge agricultural holding companies which save their own financial resources only to increase gross production of certain crops without taking into account any ecological factors and natural resources.

Modern possibilities of the geoeconomic space are characterized by active innovation and technological development, which is reflected in the continuous innovation breakthroughs and technological formation of the world unity.

That is why the urgency is to create conditions for adaptation to the geoeconomic features and receive appropriate benefits for the development of certain sectors of the economy, including the development of the agricultural sector as a food base and export base for the future. The main condition is to increase the susceptibility of the national economy to the new trends in the global economic sphere.

It should be noted that the national economy as a part of the global economic system has activated some elements of an integrated world system, but their development is slow.

http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html
The factors of negative impact are still unresolved. Among the most serious there is the issue of regulation of the internal market, the process of pricing, quality and standards of established products as well as the slow integration process, the adoption to the external conditions of the organizational and economic structures etc.

With this, industrial base of national economy must be adapted according to the geoeconomic space including monetary conditions and trends, conditions and readiness to invest and generate innovations, changes in the labor market and so on. The level of adaptation to the geoeconomic environment may indirectly be reflected by the export share in the world which characterizes features of the national economy for the future reproduction.

According to the Ministry of Economic Development and Trade of Ukraine, exports in 2012 amounted to 68.8 million, which characterizes the growth by 0.6% compared to the previous year. In the exports commodity structure the leading positions are traditionally occupied by metal. In recent years, due to declining competitiveness of Ukrainian ferrous metallurgy and unfavorable world market supply, many kinds of products and prices are still below previous highs. The share of steel products exports in Ukraine is kept to a minimum, only 27.5%.

The second place in Ukrainian exports takes food, aided by the expansion of gross production (mainly cereals and oilseeds) and rising prices on the world market. In 2012, due to the high level of gross production, the volumes of food exports has significantly increased and high market conditions provoked high prices. Due to the favorable combination of two key factors and very difficult situation in other main export sectors, the share of the food in Ukraine's exports has significantly increased, reaching 24.3% compared to 10-12% in previous years.

The main products of Ukrainian food exports in 2012 were sunflower oil ($ 4 billion), corn (3.9 billion), wheat (2.4 billion), rape (0.8 billion), soybeans, barley (by 0.7 billion), chocolate products (0.65 billion), cheese (0.35 billion) and flour (0.3 billion).

Taking into account the above mentioned, it is possible to obtain benefits from the integrity of the economic area of the world economy. It is confirmed by the implemented export opportunities of the national agricultural sector in 2012. Therefore, to adapt the agricultural sector to the geoeconomic environment it is necessary to improve the individual elements, to coordinate the sectoral aspects of the according to the modem trends and changes in the global economic system. It means that it is necessary to develop the innovative spheres and increase the share of domestic products in world exports, to activate the process of usage of the alternative energy sources, to introduce the ecologically oriented technologies of agricultural production, aimed at the safety of natural resource base.

An important factor in the geoeconomic development of the industry is choosing of an effective strategy or the behavioral models of foreign economic activity, taking into account the integrity of the world economic system.

The strategy should be based on internal aspects, taking into account the sectoral structure of the economy and its capability to adapt to the environment. The adaptation of the foreign trade to the internal and external geoeconomic changes can be carried out under such conditions as:

- the full economic adaptation which is equilibrated according to the key social and economic parameters of foreign economic activity;
- the adaptation which is based on the economic and territorial cooperation, taking into account the established trade relationships;
- the adaptation which is based on the combination of different behavioral patterns to develop economic and geoeconomic trends.

The geoeconomic model of foreign trade is not limited by trade links. It is connected with economic and social activities. Therefore, among the main geoeconomic factors of the
Agricultural sector there are scientific and technological activities, innovation and investment, social, cultural and environmental aspects, which are able to make the set of factors which have an influence on the market and prospects.

The grounded system can be developed in three forms from self-regulating one to the indicative and programmable. Accounting the dynamism of geoeconomic processes and phenomena, the self-regulatory system has a high sensitivity and, therefore, the risks of changes in the environment. It requires some appropriate economic measures to regulate tax, financial, credit and monetary mechanisms.

Indicative system provides frequency of effects on foreign trade based on the assessment of certain indicators in the short term.

Unlike earlier examples, the programmable system allows medium- and long-term prospects in view of selected development priorities. These priorities in the national economy are related to cooperation with the World Trade Organization, which provides some stable prospects and will continue to influence on the external capabilities of our country.

That is why for the development of the national economy and the agricultural sector as the basis for the food security, the programmed system of foreign trade with the stable prospects is the most effective one. The choice of this model is associated with the appropriate information provision, which will focus on the development of the predictive parameters and justify the appropriate changes in the social and economic indicators.

In this case, the existing patterns of the agricultural sector’s development in geologic environment have a direct connection with the formation of food security. Therefore, geoeconomic factors in the industry’s development should be focused on internal resources and industrial capabilities of enterprises, as well as to consider the organizational, managerial, social, cultural and environmental features that combine an internal basis of the development and foreign economic trends to form the food base of the world.

An important aspect of the industry’s development is the positions of the leading countries in geoeconomic environment which are able to change the behavioral models of the foreign trade activities of all other participants in world economy, including the formation of export potential.

The adaptation of the agricultural sector to the geoeconomic environment

An important component of sustainable development of the agricultural sector of Ukraine, as has been shown above, is the process of globalization with its direct and significant impact on certain domestic economic processes and phenomena. The globalization processes are characterized by a set of competitive advantages of individual countries at the global level in economic, social and environmental areas. The modern development of the national economy and the domestic agricultural sector does not reflect the trend of economic, social and environmental development of individual enterprises in rural areas.

The combined model of globalization of national economies includes large national businesses, medium and small businesses, multinational companies and the weights that determine the share of the relevant business in the structure of the national economy. Among ten countries that have the best position on the index of sustainable development there are Finland, Iceland, Sweden, Norway, Switzerland, Luxembourg, Denmark, Canada, Ireland and Australia. Let’s have a look at the causal relationships in the sustainable development of national economy and sectors of the economy (Figure 1).
PART 4. ENVIRONMENTAL AND ECONOMIC PROBLEMS OF INCREASING AGRICULTURAL SECTOR COMPETITIVENESS

Figure 1. Comparative assessment of the world economies according to the index of their sustainable development

Resource: Calculated and constructed according to the World Bank.

It should be noted that globalization is used primarily by global economic leaders to enhance their competitiveness. The basis of the gross domestic product of the country is formed by the "Group of Eight" - to 45.0%, the rest one are in other countries. Taking into account all the factors, the today situation can characterize the national economy according to the index of sustainable development as one that requires activation of innovation and investment to all sectors of the economy. According to the aggregate index the national economy of Ukraine takes the 45th place in the world among 233 other countries.

The main feature of the leading countries is the presence in the structure of value of the economic added significant proportion and highly intellectual labor, as which is reflected through the indices of competitiveness and environmental dimension of society based on knowledge, the activity in innovation by directing approximately 3.0% of the gross domestic product on the research and further development.

Particular the features of the sustainable and balanced development are combining the social, economic and environmental aspects, which require the implementation of appropriate actions to directly enhance foreign trade based on geoeconomic changes and trends (Figure 2).

Taking into account the level of natural resources that was estimated in the amount of $460.0 thousand on each citizen, Ukraine to 2020 can enter the twenty largest countries. The agrarian sector is the basis of forming of the food security and the corresponding export potential.
The research provides an opportunity to substantiate that the implementation of measures as for the increasing of the agricultural sector's financial dimension in shaping of the national economy (the actual 10.0%). It is associated with a considerable amount of qualitative organizational, managerial, informational, technical and technological activities on the basis of innovation and investment accounting the geoeconomic changes and trends.

According to the World Bank's statistics, the national economy has some social, economic and environmental benefits. It is connected with the need of implementation of measures at the national, regional and local levels in order to promote innovation and investment development in the industrial and social spheres and activation of appropriate environmental management.

The relevant issue is the introduction of new innovative technologies for the prospective combination of economic, social and environmental priorities at different levels of governance. It requires additional investment capital. The transition to the new technologies is closely related with biotechnology related with a focus on commodity of crop production and food forming, using measures of ecological and environmental conservation.

The combination of economic and environmental priorities in the development of the agricultural sector stimulates the emergence of new social benefits, including the consumption of environmentally friendly products, conservation of ecosystems for the future generations. The introduction of some new technologies is associated with activation of bioenergy, which has a positive impact on the environment.

Thus, taking into account the internal factors of influence, each region has a different level of technological readiness for the introduction of innovative technologies. According to the World Economic Forum in 2012, the leading position in terms of technological readiness

http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html
PART 4. ENVIRONMENTAL AND ECONOMIC PROBLEMS OF INCREASING AGRICULTURAL SECTOR COMPETITIVENESS

take Kharkov, Odessa, Dnepropetrovsk, Donetsk and Kyiv regions. As for the implemented technologies the first places take Donetsk and Dnepropetrovsk regions. The lowest level of technological readiness is grounded in Kirovograd, Ternopol and Chernihiv regions. The technological readiness describes the features of various regions to implement technological innovations in different sectors of the economy, including agriculture, and is based on a combination of internal features in their development (Figure 3).

### Figure 3. Rating regions of Ukraine in terms of technological readiness in 2012

*Resource: Powered by the author according to the World Economic Forum (WEF).*

Together rated by the World Economic Forum, technological readiness of Ukraine is on the 81<sup>st</sup> place of 144 countries in the Global Competitiveness Index. It indicates a strong need to increase the flexibility and adaptation of economical sectors to the environment in order to attract the new technologies and to enhance the economic ability to use of the full information and communication technologies which are able to be changed into the technology with general purpose and become a branch infrastructure.

Under the impact of globalization and the intensification of geoeconomic factors, the influence on the development of the agricultural sector and the necessity to use the bioenergy are growing. It is an important part of ecosystems’ safety in most developed countries.

At the beginning of 2013 in Ukraine in total amount of the production, the electrical energy is produced with the help of four traditional resources and alternative energy sources. In proportion it is about 99.6% for traditional production and only 0.4% for alternative one.

http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html
nuclear energy – 46.97%, hydro – 5.85%, the thermal energy – 46.75%, wind power – 0.14%, solar – 0.18%, bioenergy (biomass) – 0.01%; energy of water – 0.1%.) Such a redistribution of primary resources has a significant negative impact on the environment, confirming the need to accelerate the development and capacity increasing of the alternative energy sources.

Professor V. Savchuk proves the economic, social and environmental performance of transition to the new technologies, noting the presence of scale biological component in all spheres of life. The development of agricultural bio-economy under the conditions of geoeconomic factors which have an impact on the environment, the Author is combining with the need to address issues of energy, economic and food security, the introduction of biotechnology, reducing of energy costs, restoration of land building, preserving of natural resources in rural areas (Savchuk, 2011).

In our research, we grounds that the influence of the geoeconomic factors on the development of the agricultural sector has and will have a close relationship with the globalization processes and phenomena, including the context of economic, environmental, food and aggregation of the national security.

That is why the further development of the industry should be focused on global trends and the need to introduce ecologically oriented approach that combines opportunities for the economic and environmental benefits and social priorities for the population of the country and its regions.

The basis of the industry is an important component of the further development. The basis means natural resource potential, which requires the introduction and implementation of different actions in the direction of conservation and restoration of nature.

Ecologically oriented approach is proved by the combining of elements of the agricultural sector with regard to the environmental criteria to minimize the negative impact on certain types of natural resources through the implementation of modern innovative technologies. Optimal resource provision should be based on the ability of natural systems to neutralize the negative impact of the resources' usage in the industrial process and renovation of the components' quality of the environment. The results of activities at different governmental levels are ensuring of the energy effectiveness saving crop production, improvement of product quality to form the food security in the regions and in the country in the whole.

The ecologically oriented approach to the development of agriculture and industry adaptation to the globalization changes should be based on the consistency with the influence of all the geoeconomic factors, including legal to technological innovations and considering the impact of climatic peculiarities of regions and the level of impact of environmental risks.

The implementation of different practical measures should be based on the clean production to ensure self-cleaning areas and reduce the negative impact on the ecosystem. It is proved by the results of such implementations in the developed countries of the world.

Taking into account the results of our research, it is revealed that all the geoeconomic factors of the agricultural sector's development should be focused on national natural resource base, taking into account economic, social, cultural and environmental features in order to minimize risks and enhance the benefits of geoeconomic environment. Combining the internal basis in the development, the appropriate technologies, readiness for the innovations and globalization trends in formation of the economic, energy and food security is the main task of nowadays science.

References


http://www.mnau.edu.ua/ua/02_02_01_01_vishnevskaya.html

297
Геоэкономические аспекты развития аграрного сектора

Аннотация. В статье рассмотрены теоретические и методологические аспекты развития аграрного сектора с учетом влияния геоэкономических факторов воздействия с целью выявления потенциальных преимуществ и минимизации экономических и экологических рисков. Обосновано, что мировые глобализационные потоки и процессы в экономической, финансовой, производственной, социальной, экологической и других сферах выступают ориентирами развития любой национальной экономики на перспективу. Выявлено, что игнорирование глобализационных изменений и тенденций будет ограничивать возможности в получении преимуществ на общегосударственном уровне. Национальная экономика как составная часть мировой хозяйственной системы активизировала отдельные элементы целостной мировой системы, но их развитие происходит медленно. Именно поэтому нами обосновано, что факторами негативного влияния остается нерешенность вопроса по регулированию внутреннего рынка, процесса ценообразования, качества и стандартизации созданной продукции, а также медлительность интеграционных процессов, формирования адаптированных к внешним условиям организационно-экономических структур.

Ключевые слова: глобализация, геоэкономические факторы, геоэкономический подход, внешние риски, геоэкономическое пространство.