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**AGRICULTURE AND FOOD ECONOMY
WITHIN THE EU FRAMEWORK**

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Possible economic consequences of the free trade area creation between the European Union and Ukraine for the agri-food sector

Abstract. This paper investigates the possible development of Ukrainian agriculture in terms of creation of a free trade area (FTA) with the European Union. Prospects for export-import relations between Ukraine and the EU as well as the competitiveness of domestic agricultural goods in domestic and foreign markets are analyzed. An economic-mathematical model was used for determining negative and positive consequences of the FTA formation for grain, dairy and meat industries. It is expected that the current positive Ukrainian trade balance in agri-food products will decrease significantly as a result of the trade liberalization. The analysis also shows possible changes in the gross domestic product, trade, level of economic activity, human welfare etc. Suggestions how to avoid the negative effects of the FTA on agricultural markets in Ukraine have been developed.

Key words: agricultural products, liberalization, free trade area, European Union.

Introduction

In Ukraine, the priority of an European integration is officially set, with a simultaneous development of mutually beneficial cooperation within the framework of other regional agreements with countries of the Commonwealth of Independent States (CIS), the Black Sea Economic Cooperation (BSEC) etc. Accession to the WTO on 16 May 2008 has created background for starting talks on formation of a FTA between the EU and Ukraine, which would nowadays fully meet foreign economic interests of both parties.

The process of free trade area formation includes: an implementation of zero tariff for a free movement of goods, services and capital, and in the future for a free movement of labour; a significant reduction of non-tariff barriers to trade through harmonization or mutual recognition of technical standards; a convergence of domestic regulatory standards with the European norms and best international practices in services trade; improvements in competition policy, corporate governance and internal market regulation according to the European principles, a harmonisation of individual and environmental protection standards; a provision of necessary support, including technical assistance, for investments in infrastructure, education and training.

A particular attention during the negotiations is given to defining the parameters of agricultural products trade. At the negotiations both sides declared goal to liberalize trade only for 95% of products and to allow exceptions from free trade regime for 5%, essentially for agricultural goods.

The European vector of Ukraine's foreign policy development, structural changes in the Ukrainian economy in the framework of the WTO and its integration into the

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international economic system determine the need for developing new approaches to agricultural market regulation.

This paper is organized as follows. In the first section, material and methods of investigation are introduced. The next section describes an analysis of bilateral trade of agricultural products between Ukraine and the European Union. The following section presents simulation results concerning the Ukrainian agri-food sector development and discusses possible effects of FTA formation on some industries. A summary is the final section.

Material and methods

Research results and conclusions were obtained by using a systematic approach to socio-economic processes using the following methods: the historical and logical method for investigation of the world economy development; methods of comparative analysis and expert evaluations for an analysis of the dynamics of trade in goods and factors that are affecting it; methods of historical analysis and comparison to study and identify stages of export policy; methods of formalization, modelling, methods of correlation-regression analysis, mathematical statistics and predictive extrapolation based on Global Trade Analysis Project (GTAP) for the study of development of foreign economic activity between Ukraine and the European Union.

For analyzing the causal relationships in the world economy, computerized general equilibrium models (Computable General Equilibrium Models) are used. The scenario of Ukrainian agriculture development in terms of FTA creation is build using an extended version of the Global Trade Analysis Project model which is a computable general equilibrium model of the world economy. GTAP model is a multi-regional, multi-sectoral, static, general equilibrium model based on a neo-classical microeconomic theory. The database contains detailed data on bilateral trade, transportation and protection, characterizing economic linkages among regions, and consistent individual country input-output databases which account for intersectoral linkages in 2004.

Determinants of equilibrium that determine the basic structure of the model are the following:

- all markets are in equilibrium (an automatic cleaning of markets from surplus or deficit)
- enterprises work at a break-even point (no economic profit)
- revenues are equal to costs
- production function describes the production technology
- households maximize utility in the process of economic decision making, and enterprises maximize profit.

During the study, the decrees of the Cabinet of Ministers of Ukraine and the President of Ukraine on regulatory issues of foreign economic activity were used. The information and statistics were gathered from different sources: the State Statistics Committee and the State Customs Service of Ukraine, official reports and analytical publications of leading

international economic organizations², monographs and scientific publications of domestic and foreign scientists-economists.

Results

Analysis of Ukraine's trade in agricultural products with the EU countries

Ukraine has considerable agricultural potential due to its vast areas of fertile soil and closeness to key markets in the Middle East, North Africa, the former USSR and, potentially, the EU. Ukraine's food industry, which consumes raw materials produced by the domestic agricultural sector, was a driving force for the economic growth that started in 2000. Since then, the growth has been unsteady which, for the most part, can be attributed to the sector's dependence on grain crops that are known to be largely dependent on weather conditions.

The Ukrainian agricultural products sector has been poorly integrated with the international trade. Taking into consideration Ukraine's agricultural resources, the agrarian policy plays a critical role for the future of sector's development. Ukraine's integration into the WTO and later into a free trade area with the EU is an essential condition for speeding up structural reforms in the country, as well as for its potential to become evident on international markets.

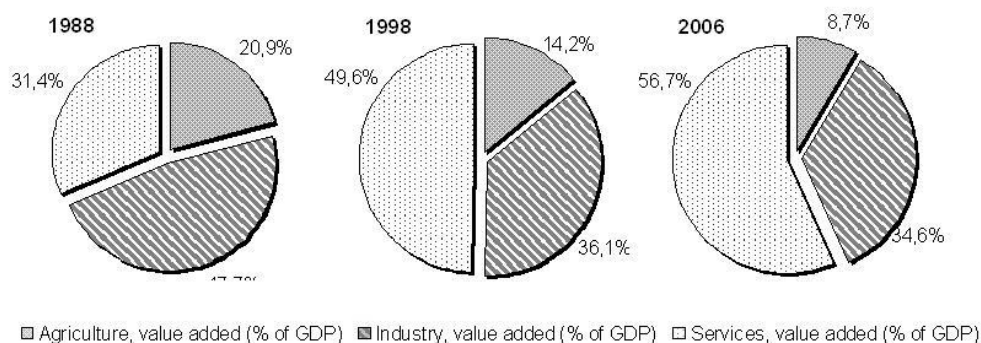


Fig. 1. GDP of Ukraine by sector, %

Source: own construction according to data from the Eurostat and the State Statistics Committee of Ukraine.

Agriculture accounts for about 9% of Ukraine's gross domestic product (GDP) (Figure 1). About 5.7 million people are employed in the agricultural sector, or 19.8% of the professionally active population. The difference between the share of GDP produced in the sector and the share of people employed in it reveals the sector's very low productivity.

In 2008, the share of turnover with the EU in the total Ukrainian trade balance accounted for about 36% (Table. 1). At the same time the share of turnover in agricultural products was only 12%. The main trade products are grains, oil products and foodstuffs. Signing of a Free Trade Agreement (FTA) with the EU will have a significant impact on

² International Monetary Fund, European Commission, World Trade Organization and other.

agriculture as a whole, which through fiscal mechanisms would significantly affect the social sphere.

Table 1. Ukraine's and the EU trade with main partners in 2008

Ukraine				European Union			
Rank	partner	million euro	%	Rank	partner	million euro	%
1	Eu-27	40 920.5	36.0%	1	United States	435 995.5	15.2%
2	Russia	29 368.9	25.8%	2	China	326 325.0	11.4%
3	China	6 727.6	5.9%	3	Russia	278 770.2	9.7%
4	Turkey	5 407.5	4.8%	4	Switzerland	177 848.3	6.2%
5	Turkmenistan	3 411.2	3.0%	5	Ukraine	39 523.8	1.4%
	World	113 821.0	100.0%		World	2 861 807.6	100.0%

Source: constructed according to International Monetary Fund data.

The last ten years are characterized by a considerable increase in the volume of agricultural products trade with the EU countries and its share in the total turnover. An analysis shows that by 2008 the share of agricultural products in the total exports amounted to about 7.12%, but in the last two years it has grown to 20%, supported by record grain and oilseeds harvests and the trade liberalization after the WTO accession. The average exports growth over the past ten years has been 27%, for imports 23%. Our country exported 1.2 times more agricultural products than imported. However, these positive indicators of foreign trade do not show that Ukraine is ready to form a free trade area with the EU. Grain and oil industries are currently developed and have a strong infrastructure that allows the Ukrainian enterprises to compete with the European companies. But the dairy and meat industries are weak. Old material base and low investments in these sectors have led to increases in dairy and meat products costs while their quality remains low.

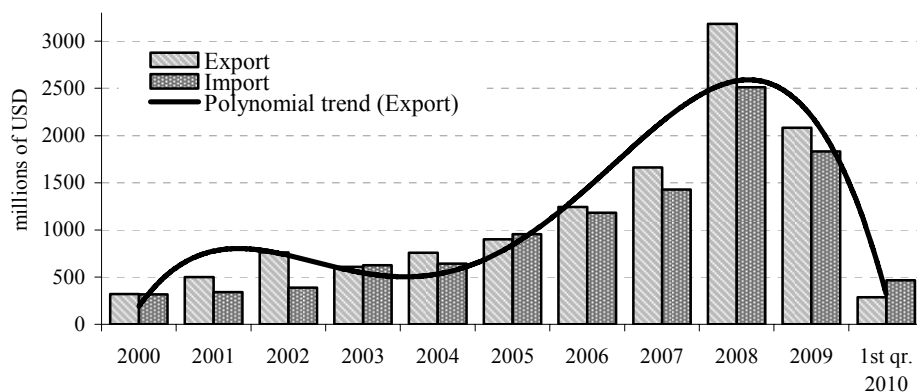


Fig. 2. Ukraine's agricultural products³ trade with the EU-27

Source: self constructed according to data from the State Statistics Committee of Ukraine.

³ Group 1-24 of Ukrainian Commodity Classification for Foreign Economic Activity.

Until 2005, agricultural products imports to Ukraine were, for the most part, limited by high customs tariffs and non-tariff barriers. Over the next 4 years, the trade with the EU countries has significantly increased, and while imports of food and agricultural products to Ukraine in 2008 were only 8.7% of the total imports volume, the growth of imports of these products was 76%.

The main factors behind the rapid growth in imports of these products are a decrease of import tariffs and an increasing demand from Ukrainian consumers as their incomes grow. One of the factors for a decrease in exports of these products is a low competitiveness of Ukrainian goods.

Field crops remain the main goods exported to the EU. Figure 2 demonstrates that in 2008 whole exports of agricultural products to the European countries grew 2 times, generally due to exports of field crops increasing 4.5 times.

It is expected that the same trends will remain in the foreign trade between the EU and Ukraine in the coming years and:

- Ukraine will remain a net exporter of agricultural goods in trade with the EU
- exports of products with high added value (processed products) will decrease and imports will increase
- exports of livestock products will diminish
- cereal and oil will remain the main exported products in the agri-food group.

Major barriers to the Ukraine-EU trade in agricultural products include:

- undeveloped infrastructure (granaries, roads, transport)
- over-regulated and long customs procedures
- an underdeveloped information system concerning the market and poor access to information
- low share in the output of high-quality products (in particular, hard wheat sorts)
- failure to reimburse exporters for VAT
- export/import duties on certain products
- a ban on certain Ukrainian imports to the EU due to the inconsistency between the Ukrainian standards and those of the EU.

Considering current level of agricultural trade between the EU and Ukraine, we can conclude that there is a need to enhance the bilateral trade and investment cooperation and to discuss the possibility of a mutually beneficial invention of ways to increase the trade turnover.

Development of trade relations between Ukraine and the EU in terms of the free trade area creation

According to its political interests the European Union is not ready to offer Ukraine the prospect of membership. However, the EU can not ignore its integration process. FTA is a standard tool for cooperation with third countries.

Offering Ukraine the free trade, the EU allows Ukraine in this way to gain an access to its markets for products, services and capital and to an economic integration. On the other hand, do not forget the economic interests that the EU will defend during negotiations on the FTA. Big agricultural producers in France, Spain and Italy are concerned about the possibility of growing competition from Ukrainian goods, and may require an exception of agricultural products from the FTA.

An estimation of the impact of trade liberalization on output volumes is presented in Table 2. An analysis of data showed that the most susceptible sectors are agriculture and

mining industry. Due to increasing competition, the Ukrainian agricultural enterprises would be forced to reduce production of finished products by 2.9-7.0 per cent.

Table 2: The impact of FTA creation between Ukraine and EU on the production volumes in major industries

Industry	FTA	FTA+ ⁴
Agriculture	-2.9%	-7.0%
Mining industry	0.2%	-13.5%
Food industry	5.4%	15.9%
Metallurgy	22.8%	37.3%
Textile industry	35.0%	46.9%
Engineering	4.7%	11.5%

Source: self constructed according to the GTAPAgg7 model data.

According to forecasts by the Ministry of Agrarian Policy of Ukraine the annual growth rate of gross agricultural output till 2013 will amount up 3-5% (Fig. 3). However, in terms of FTA these indicators are likely to have a negative value and could drop to -5%, especially in the livestock sector (Fig. 4).

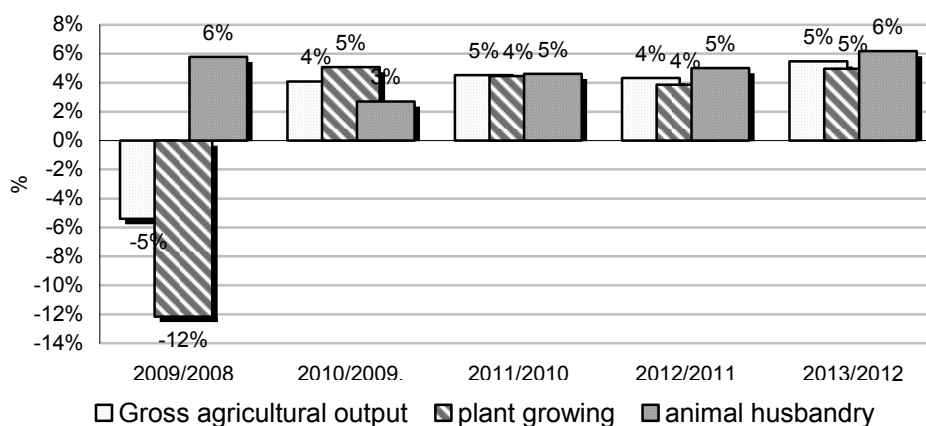


Fig. 3. Dynamics of gross agricultural output till 2013

Source: self constructed according to data from the Ministry of Agrarian Policy of Ukraine.

Typically, the GDP per capita is identified with a welfare indicator. However, in terms of FTA, the difference between welfare and GDP is very significant. This is confirmed by the GTAPAgg7 model. An attempt has been made to estimate how different levels of trade liberalization with the EU will affect not only the welfare change, but also the change in real GDP. As a result it has been found that the GDP will grow three times more slowly than the welfare. So, we can assume that the FTA with the EU will be much more efficient

⁴ FTA+ includes a liberalization of the service sector, regulatory harmonization, reforms of domestic markets and economic institutions.

for Ukraine's economy than the dynamics of real GDP could indicate. In general, the total welfare change resulting from trade liberalization may go up to 8-11%.

Of course, now Ukraine is not ready to fully liberalize its agricultural market for goods from the EU, because it is unknown what consequences of that will be. Despite of the transitional period (3-5 years) to open the Ukrainian market in which business can adapt to new conditions, such sensitive sectors as agriculture and food industry cannot withstand increased competition from the EU. As a result an extinction of companies and reduction of jobs are possible, particularly in the long run.

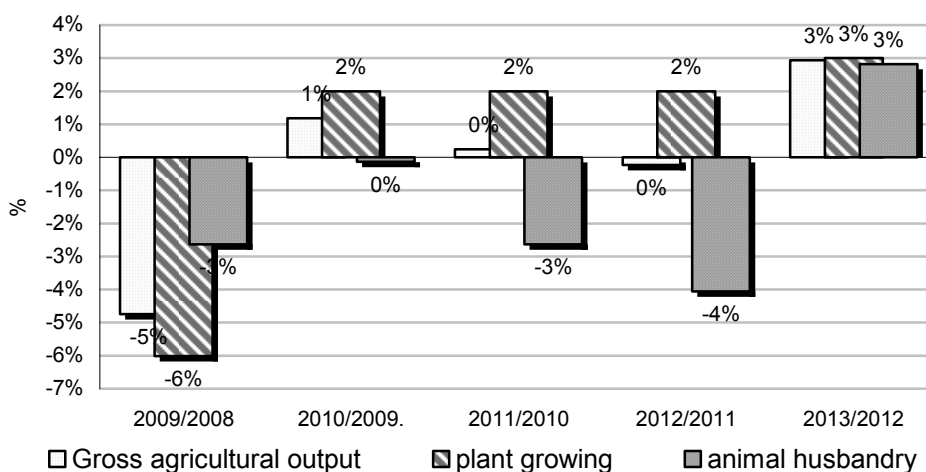


Fig. 4. Dynamics of gross agricultural output till 2013 in terms of FTA formation

Source: self constructed according to the GTAPAgg7 model data.

Analysis of the impact of FTA creation between Ukraine and the EU on different industries; cereals

Nowadays, Ukraine is actively discussing with the EU the possibility of abolition of tariff restrictions. In fact the EU imports only high quality hard and soft wheat at zero tariffs. In 2003, import quotas were imposed for such commodities as barley and low and medium quality soft wheat⁵. Today, the annual wheat quota is 2.378 million tonnes, 572 thousand tonnes of which is of US origin and 388.5 thousand tonnes of Canadian origin. Import duty on grain supply below the quota is 12 euros per tonne, over the quota 95 euros per tonne. As noted before, the cereal grain is the main type of domestic agricultural products exported to the EU. Therefore, any removal of tariff and non-tariff restrictions on imports will significantly increase the competitiveness of Ukrainian grain in the European market.

It should be noted that in July 2009 new standards for the Ukrainian wheat were enacted, which partly solved the problem of inconsistency with the European quality and safety standards.

⁵ Within the quota system (TRQ) the European Commission annually determines the amount of cereal grain imports to the EU countries.

Analysis of the impact of FTA creation between Ukraine and the EU on different industries; livestock

Ukraine is not included in the list of countries that have the right to export live animals and meat to the EU. Imports of fresh meat, meat products, fresh game, livestock, poultry and other live animals from Ukraine to the EU is banned. Ukraine is allowed to export only live horses and donkeys to the EU.

Imports of meat to Ukraine are also limited via high rates of import duties that make legally imported goods uncompetitive in the Ukrainian domestic market. An ad valorem import duty for beef is 15%, for chilled and frozen pork 12% and 10% respectively⁶. But actually the European beef is not imported because of a prohibition to trade with countries that beforehand have reported Bovine Spongiform Encephalopathy (BSE) cases traced. Nevertheless, according to official figures the total imports of meat in 2002-2008 ranged within 85-512 thousand tonnes. Ukraine imports mainly poultry of American, Argentine and Brazilian origin, which is the cheapest kind of soft meat in the world, and which in turn is an important advantage for the sales in the Ukrainian market.

Table 3: Analysis of positive and negative consequences of FTA creation according to stakeholders

Stakeholder	Pros	Cons
Ukrainian producers of grain, meat, milk and dairy products	Expansion of markets Increase in produce quality Increase in productivity Increased access to financial markets, including the foreign ones	Increase in competition in certain markets (milk and meat) Additional expenditure on increase in output, diversification and increase in crop quality
EU agricultural producers of grain, meat, milk and dairy products	Expansion of markets as a result of the rapid growth in Ukrainian incomes	Increase in competition
Ukrainian consumers/ Ukraine's economy as a whole	Increase in market supply Improvement of product quality More efficient use of public funds allocated to agricultural support In the long run, expansion of exports with a high added value	Increase in the price of dairy products if domestic producers' competitiveness decreases Grain crops represent a group of goods with a low value added Increase in grain crops exports will not cause an increase in exports of products with a high added value
Government/ officials	Approval of state decisions/introduction of policies that meet European standards	Need for adoption of a state program for sub-sector development Cutting back opaque state expenditure as requirements for targeted financing get tougher
European consumers/ EU economy	Increase in market supply, decrease in prices in the long run	Increase in the EU budget expenditure for technical assistance to Ukraine

Source: author's compilation based on a study by the International Centre for Policy Studies [Gazizullin 2008].

The main barrier for Ukrainian exports to the EU is a discrepancy in the product quality standards. Only 52% of Ukrainian standards for agricultural products have currently

⁶ According to the Law of Ukraine "On Customs Tariff of Ukraine" of April 5, 2001 # 2371-III with amendments.

been harmonized with the international ones, while the figure for food industry is only 29%.

The poultry farming is so far the only branch able to satisfy market demand, whereas the pork and beef markets are experiencing a scarcity. The poultry stock revival started in 2005, but at the same time according to our forecast the cattle and cow stock will continue to drop until 2012. In the case of signing a free trade agreement, some Ukrainian producers of beef and pork will not be able to withstand fierce competition, and finally may go bankrupt.

Analysis of the impact of FTA creation between Ukraine and the EU on different industries; milk and dairy products

As a result of decrease in the cow population, milk production has grown very slowly recently. In 2008, Ukrainian milk and dairy product exports to the EU dropped by 38.8%.

Development of milk and dairy product exports to the EU is being hindered by:

- a discrepancy between the Ukrainian dairy product quality and the EU standards
- high domestic demand
- high demand for Ukrainian dairy products in the CIS countries, where quality requirements are less stringent.

In trade with the EU, Ukraine is a net exporter of dairy products. However, the country has exported mainly raw materials and imported finished products. Moreover, during the years 2000-2008 the milk and dairy products exports from Ukraine to the EU increased in value terms only 6.8 times, while imports increased 12 times. It is expected that imports of finished dairy products in Ukraine will grow rapidly in the future. The following factors could cause that:

- a stagnation in Ukraine's milk production
- a higher price competitiveness of European products
- a rapid boost in the Ukrainian incomes and in the demand in the high-price segment market (for cheeses in particular).

It is expected that the process of reaching quality standards and related product certification will take quite a while, so dairy product exports from Ukraine will be excluded from the free trade arrangement at the initial stages. The cooperation with the EU at the initial stages will be limited to carrying out EU requirements for relative quality indices. Most likely, customs tariffs for dairy imports at this stage will be preserved at the current level. At later stages, it will be possible for enterprises obtaining corresponding quality certificates to enter the EU market. The EU will require an introduction of zero customs tariffs.

Proposals to overcome the negative effects of FTA

In order to minimize or complete liquidate the negative effects of the FTA formation the Ukrainian government has to:

- avoid the formation of unilateral agreements, which will allow to form an asymmetric FTA and apply a flexible approach to implementation of the *acquis communautaire*
- reduce the impact of restrictive requirements for products origin on the trade

- focus the working group attention on lowering barriers for access to a high technology products market
- develop a concept of selective trade policy for the entire adaptation period
- determine the order of cooperation with the national producers for the industry standards, norms and rules harmonization
- ensure possible involvement of the EU institutions in Ukrainian reforms
- encourage the participation of NGOs in the EU-funded projects
- review the effectiveness of development programs for small businesses
- stimulate recovery of vocational education, developing a network of centres training and retraining employees.

Summary

An analysis of trade relationships between Ukraine and the EU shows that the most sensitive sectors of the Ukrainian food economy are the dairy and meat industries. Therefore, in case of a FTA formation with the EU it is necessary to temporarily (at least 5 years) leave the tariff and non-tariff trade barriers for the sake of a gradual adaptation of the Ukrainian market to new development conditions. At the same time, grain and oil industries are sufficiently developed, so the domestic producers will be able to withstand increased competition from the European farmers.

The most important ways of the Ukrainian economy integration with the EU are an improvement of the legislative and regulatory system, a rational state support, a harmonization of national standards with the European ones, updating the material base of agricultural and processing enterprises, investments in infrastructure, strengthening the agricultural extension service, training of qualified specialists and others.

Due to the growth of Ukrainian agricultural sector in the FTA conditions, the farmers' income could significantly increase, leading to an improvement of country's macroeconomic indicators, increasing productivity and welfare of the rural population.

The essentiality of estimated indices of the FTA impact on the Ukrainian agricultural development is very low because of a need for a large number of assumptions in the integration model. In particular, there is a need to forecast the economic performance of countries at the time the FTA enters into force and to assess the possible conditions of the agreement.

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