EURASIAN ECONOMIC UNION INTEGRATION AS ADAPTATION EFFECT IN AGRO-FOOD TRADE

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Abstract:

The paper is devoted to the analysis of agro-food trade development prospects and problems in Eurasian Economic Union (EAEU) of Russia, Kazakhstan, Belarus and Armenia. It suggests the method for estimation of integration processes in the trade of agricultural and food products. The article gives the scenario forecasts for export of meat, milk, grains, oilseeds, vegetable oils, sugar from EAEC member states. Evaluation of the integration effect is made on the difference between the forecasts and inertial integration scenarios.

Keywords:

Eurasian Economic Union, integration, adaptation, forecast, trade, agriculture.

Introduction:

The Eurasian region as well as the whole world is currently under the influence of divergent development vectors: globalization of the world economy and the choice of the majority of countries in favor of the self-sufficiency of food security, strengthening the role of governmental regulation, including protectionism and increase of diversity of geopolitical tactics and strategies in the world markets, the increase of complexity of system relations and constraints in the global economy, and in spite of all the growth of openness of national economies and the world trade. Those multidirectional trends influence the accuracy of forecasts, and complicates prognostic tools.

Now the project of Eurasian integration turned 23 years. Not easy ways of this project development create some difficulties in forecasting and modeling. In order to take a reasonable decision it is now not enough to use the national economy model and the global market model. The system analysis of integrating markets takes much more time and effort, as you need to deeply understand a lot of links between a regional economy and channels of influence, and at the same time, it is necessary to consider the economy of the integrating area as a whole.

The Eurasian Development Bank (EDB) and the Eurasian Economic Commission (EEC), completed the project and published its results for the development of the system, capable of generating economic forecasts for the EAEC member states (Forecasting System for the EEU 2016). The integrated system of models, covering five countries, can be used for the analysis of economic processes, forecasting, and the development of proposals and recommendations on the rationalization of economic policy in the framework of the EAEC. An important advantage of the integrated system model is that it allows calculate both separately for countries and for the entire integrated alliance, taking into account the links that exist between economy of EAEC countries and the outside world. It is based on the monetary and fiscal spheres dynamic models. However, still missing a model representation of the real situation on the commodity markets of the EAEC and in particular, the agricultural and food market. The situation is similar with the international systems of models. For example, in the model AGLINK-Cosimo the EU countries are represented both in the form of national blocks and in the form of the Union with a common economic policy (Romanenko, Evdokimova 2015). However, in this model the EAEC countries are not represented in full. Besides that the impact of customs policy of the EAEC changes, which causes a change in the magnitude and the intensity of the trade flows, is not taken into account. Thus, the simulation results show that the sanctions impact for the EU is very limited, because the EU can divert a significant portion of its trade with Russia to other markets. The impact of the sanctions on the Russian market was predicted as significant because according to calculations the food imports could not be easily replaced by both the national production and redirection of trade flows (Dillen 2015, Siptits 2009).

So, it should be noted that currently the adequate model of integrated agricultural markets of member countries of EAEC is not exist. This makes it difficult to obtain reasonable forecasts and situational analysis of trade flows both for each of the countries and the integrated union in general. Deepening of integration has a significant impact also on the functioning of the world commodity markets.

The development of integration processes in the EAEC area presupposes the free cross-border movement of factors of production in the form of labor and capital, which resulted in

expected increase of production of agricultural raw materials and food in Russia, Belarus, Kazakhstan, Armenia, Kyrgyzstan, the intensification of inter-country food trade, export growth.

The expected socio-economic effects are the following - increase of per capita income of the population, followed by the growth in demand for consumer goods, including food. The emergence of such a positive feedback is an important part of the process of economic integration, largely determines the success of the EAEC project.

The historically small period of existence of the Customs Union became a first step on the way of the institutional environment formation. The rational distribution of agricultural production in the member countries begun, the basic tools and infrastructure of the common agricultural market established. Thus, for the successful management of integration processes in agrarian sphere of the EAEC a system of measurement of essential properties and characteristics of these processes is needed (Iodchin 2013).

Materials and methods

The increase in exports of agricultural products and food is one of the objectives of economic integration. Export performance in terms of value, as well as internal, cross-border trade allows the degree of achievement of targets in the economic integration of the member countries of EAEC to determine. It should be noted that in accordance with the commodity nomenclature of the foreign economic activity of the EAEC there can be implemented several options of the analysis of exchange transactions and the assessment of their performance: 1) cross-country and foreign economic exchange in value terms; 2) the same by the dedicated group of food and agricultural raw material; 3) the same by individual commodity items in volume; 4) imports of foodstuffs and agricultural raw materials, both in volume and in value.

To evaluate the performance of convergence processes listed above it is proposed to use the coefficient of variation calculated for each time section (year, quarter, month - depending on the frequency of observation in the monitoring system) of time series. It should be noted that this terminology we use in a wide scope. In the majority of scientific research, devoted to the processes of economic integration the word convergence refers to the selected indicators of the level of economic development of a country, region, territory. In most cases we are talking about the country's GDP, the gross regional product, or their specific (per capita) values.

Evaluation of convergence trends in agricultural sectors of the EAEC member countries, specified by the above indicators, requires different approaches. The synonymous of convergence is obviously the reduction of non-uniformity, which justifies the use as a measure of convergence the coefficient of variation. In addition, as shown in (Voronov et al. 2014), in comparison with

other methods of unevenness evaluation of time series, the variation coefficient is sensitive to changes in levels of the time series.

Analysis of the degree of achievement of targets in the field of cross-border trade and external economic exchange of members of the EAEC can be performed by involving inter-country trade statistics of the paired inter-country exchange, as well as import and export of foodstuffs.

The following illustration and conclusions are based on statistical data of cross-country exchange of agricultural raw materials and food in terms of value (codified commodity nomenclature of foreign economic activity (codes 01 - 24)).

In the absence of scenario forecasts for the development of integration processes in the food markets, however, some authors believe that the integration effects in the program documents of the EAEC are negligible in recent years (i.e. in the first 2 years of existence!), but are exaggerated in the long term (Astrov et al.): Long-run effects estimates are always bigger than short-run (Havlik 2015: 13).

In the "Long-term forecast of economic development of the Eurasian Economic Union till 2030" (Long-term forecast 2015) there are considered three possible scenarios: 1) "extended status quo," 2) "raw transit bridge", 3) "own center of power."

Discussion of these strategic options in the expert community has shown that with high probability it is expected the realization of the first scenario. Its essence is as follows: "In the frames of the "extended status quo" scenario the national economies are largely operate independently under the influence of domestic and external factors. Under these conditions the economic development of the states - members of the Union is based on their own "traditional" sources of growth, providing low equilibrium rate of economic development with the remaining infrastructure constraints. Areas of integration and cooperation are formed strictly within the framework adopted by the regulatory base of the Union, the achieved integration agreements are implemented under new emerging barriers, exceptions and limitations. New synergy effects do not turn into the large-scale ones ("economies on scale", "technological effect"). As a consequence, the cumulative integration effect for the Union is not considerable and falls mainly on the end of the planning period (2025-2030) after completing all the transitional provisions of specified in the Treaty of Union "(Long-term forecast 2015: 31).

Thus, the forecast of integration effects in the agricultural sector has been considered as part of the first scenario only.

Forecasting technique was reduced to a visual analysis of the characteristics of commodity exchange between Member States of EAEC in the period of the years 1995-2015 by grains,

oilseeds, vegetable oil, sugar, milk and meat with the selection of analytical expressions and trending. It was assumed that in accordance with the accepted scenario the predicted values contained the sum of the effects: inertial development and the effect from integration. Integration effect was calculated on the basis of expert assessments. The future development of this theme presupposes the use of the mathematical model similar to the one that was used by us in the modeling of the Customs Union agri-food sector (Siptits 2010, 2013, 2015).

Results and discussion

Turnover of cross-border trade in the dynamics is shown in Figure 1.

Since 2010, it becomes noticeable the positive effects of integration in the food trade between the Member States EAEC. It must be said that the rapprochement process of cross-border exchange of agricultural products was observed from 2004 to 2009, that is long before the formation of the Customs Union in 2010.
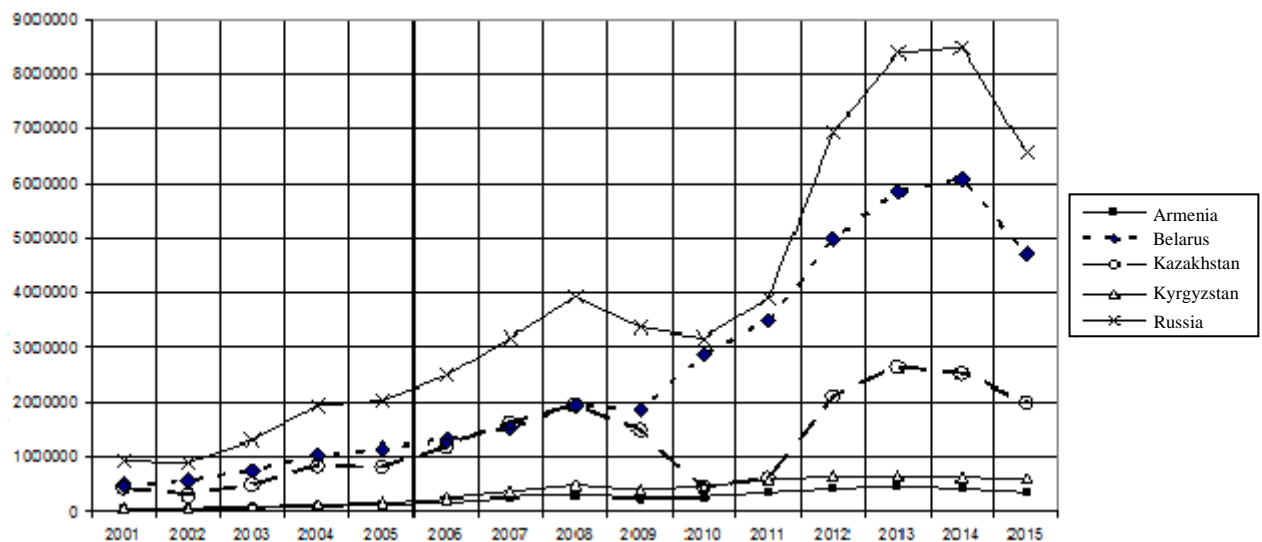

Figure 1. Turnover of cross-border trade among member countries EAEC. Data source: electronic resource: www.intracen.org.

Table 1 shows that, under any scenario, there is an increase in the export of food products from the EAEC countries, but the measures of regulation laid down in the second scenario give a higher positive effect on the increase in exports in value terms, with meat steadily increasing the share of exports in world trade It is observed only under the integration scenario. The advantage of the development of events in the integration scenario is typical for the entire forecast period, which underscores the vital need for coordination of actions in key areas of the agribusiness development determining competitiveness and economic cooperation. Adoption of such measures

is able to overcome negative trends (see Figure 1) in the dynamics of export volumes of the countries of the EAEC caused by complex external economic conditions.

The forecast of the export share of meat and meat products reveals an interesting trend in the decline in the growth rates of export volumes by 2030 (see Table 1). The share of the EAEC countries in world exports is low. This is the main food commodity group in the import of the EAEC countries. The growth of export flows due to the primary integration effect is expected to reach its economically determined ceiling in intra-union trade and will continue to grow due to foreign economic opportunities.

The strongest growth in the share of exports of the EAEC countries in the world is projected for the milk and grain markets, and it is for these markets that the integration scenario will have the most significant positive effect.

The growth trend in the production of oilseeds and vegetable oils will continue and accelerate across all the countries of the EAEC that produce these products, and the growth in the share in world exports through sugar is provided only by the integration scenario.

Table 1: Forecast of the EAEC share in world food exports, %

Years	2020		2025		2030	
Scenarios I - inertial scenario II – integration scenario	I	II	I	II	I	II
Meat	0,87	1,03	1,08	1,09	0,96	1,15
Milk	2,76	3,27	2,74	3,38	2,84	3,47
Grain	5,36	6,50	5,81	6,90	6,00	7,26
Oilseeds	0,30	0,36	0,32	0,39	0,33	0,40
Vegetable oils	4,77	5,80	4,95	6,08	5,25	6,28
Sugar	0,95	1,13	0,94	1,14	0,93	1,14

Table 2: Evaluation of the effect of integration, billion dollars.

Years	2015	2020	2025	2030
Meat	0,11	0,21	0,22	0,30
Milk	0,33	0,43	0,56	0,57
Grain	1,32	1,82	1,86	2,26
Oilseeds	0,04	0,05	0,06	0,07

Vegetable oils	0,32	0,42	0,48	0,46
Sugar	0,07	0,09	0,11	0,12
TOTAL:	2,18	3,02	3,10	3,78

The forecast results are shown in Tables 1 and 2. The dynamics of the integration effect is illustrated in Figure 2.
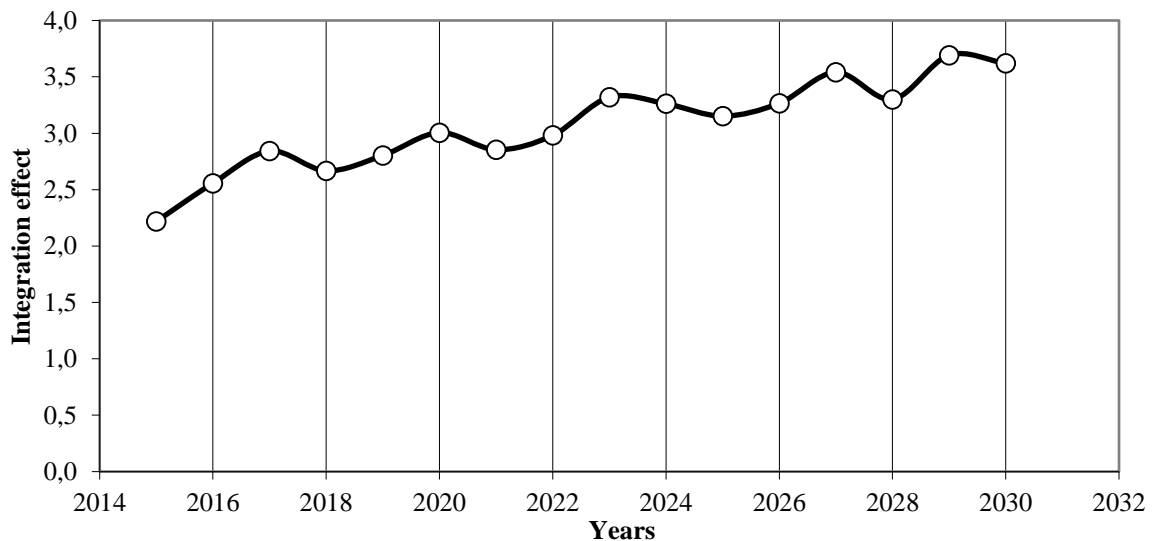

Figure 2: Forecast for the integration effect in the agricultural complex of the EAEC

Conclusion

The contribution of the EAEC member-countries in the total volume of export of agricultural products is extremely uneven, and integration effects mainly have influence on the strong areas of each of the countries: grains - Russia and Kazakhstan, meat and milk - Belarus. The forecast could also be affected by the political component of integration processes: on the one hand some other countries want to enter the EAEC, on the other hand the dynamics of the integration processes is strongly influenced by the economic state of Russia.

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