



Reaction of the regional agroindustrial complex to integration processes

Reacción del complejo agroindustrial regional a los procesos de integración

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Contents

- [1. Introduction](#)
- [2. Methods](#)
- [3. Results](#)
- [4. Discussion](#)
- [5. Conclusion](#)
- [References](#)

ABSTRACT:

The reaction of the leading interbranch complex of the West Kazakhstan Region to the growing integration processes in the Eurasian space has been determined. The agroindustrial complex stipulates the regional specialization in the republican and international labor division. The leading structural links of the complex are grain farming, beef cattle production, and flour-and-cereals industry. The positive changes in the economy of the region under the impact of the intercountry integration have been identified by means of the correlation and regression analysis. The cross-sectorality plays an important role in the structure of the regional trade. The growth of export and foreign trade turnover of agricultural products causes the growth of the gross regional product. The forecast of values of gross regional product and foreign trade turnover of the region and the forecast of the growth of integration effect value have been calculated under conditions of functioning of the Eurasian Economic Union. The structural transformations of the particular fields and the improvement of the product competitiveness will promote the further integration of the agroindustrial complex.

RESUMEN:

Se determinó la reacción del principal complejo interprofesional de la región de Kazajstán occidental con los crecientes procesos de integración en el espacio eurasiático. El complejo agroindustrial estipula la especialización regional en la división laboral republicana e internacional. Los principales enlaces estructurales del complejo son la agricultura de granos, la producción de ganado vacuno y la industria de harina y cereales. Los cambios positivos en la economía de la región bajo el impacto de la integración internacional han sido identificados por medio del análisis de correlación y regresión. La intersectorialidad juega un papel importante en la estructura del comercio regional. El crecimiento del volumen de negocios de exportación y comercio exterior de los productos agrícolas provoca el crecimiento del producto regional bruto. La previsión de los valores del producto regional bruto y el volumen de negocios del comercio exterior de la región y la previsión del crecimiento del valor del efecto de integración se han calculado en condiciones de funcionamiento de la Unión Económica Euroasiática. Las transformaciones estructurales de los campos particulares y la mejora de la competitividad del

1. Introduction

The development of integration processes plays a positive role in the economic interaction of the countries-members in the field of functioning of the common market of products and services, production factors. The sustainable development of all subsystems of the region, including the agroindustrial system, is possible due to the activity of this type of cooperation. The necessity of intensification of the cross-border integration of the Kazakhstan's regions with the countries-members of the Eurasian Economic Union (EEU) is stipulated by the competitiveness in the international markets that have already been divided. The problem of dependency of the social and economic development upon the external factors is typical for the West Kazakhstan Region that has the longest border in Kazakhstan with five regions of the Russian Federation: the Astrakhan Region, the Volgograd Region, the Saratov Region, the Samara Region and the Orenburg Region; seven out of thirteen administrative districts of the region have cross-border position.

According to the economic theory, regardless of what subsystems or fields of the economy are integrated, the impact by means of the chains of interbranch relations is extended to the whole economy (Francois *et al.*, 2003). Therefore, the measurement of the integration effects shall be done simultaneously at the level of different sectors of economy and at the macroeconomic level as well (Francois *et al.*, 2010; Francois *et al.*, 2013; UNCTAD, 2012). Since the formation of the EEU, the functioning of the common market caused many discussions, the main subject of which is the efficiency estimation of this integration association, in general, and also the participation efficiency of the particular economic systems of the regions in integration (Ivanter, & Geets, 2012; Yakovleva *et al.*, 2009).

The objective of the research is to determine the reaction of the agroindustrial complex of the West Kazakhstan Region to the occurring integration processes within the frameworks of the EEU.

2. Methods

The methodology of the present research is based upon the concepts of the cross-country and cross-regional economic integration. The research uses the dynamic rows of values of the social and economic development of the West Kazakhstan Region for the period from 2005 till 2015. To estimate the integration processes at the macrolevel, the following blocks of values characterizing the scale and dynamics of the volumes of flows, stocks, trans-border activity of the economic entities and the degrees of the interpenetration of the economies were used:

- integration indexes of the commodity market;
- integration indexes of the services market;
- integration indexes of the labor market (Kee *et al.*, 2009).

The estimation of mutual trade dynamics was performed using the following two indexes. The publicity index of the economy is a ratio of the volume of mutual trade (trade with the members of integration association) of commodities to GDP (1):

The estimation of mutual trade dynamics was performed using the following two indexes. The publicity index of the economy is a ratio of the volume of mutual trade (trade with the members of integration association) of commodities to GDP (1):

$$TO = \frac{X^{int}}{GDP} + \frac{M^{int}}{GDP}, \quad (1)$$

where X^{int} is export to the countries of the integration association (US dollars),

M^{int} is import from the countries of the integration association (US dollars),

GDP is GDP of the country (US dollars) (Lipin, & Polyakova, 2014).

The importance factor of mutual commodity trade determines the share of turnover of mutual trade in the total trade turnover (2):

$$TI = X^{int} + X^{int} / X^{all} + M^{all}, \quad (2)$$

where X^{all} is export of everything from the country,

M^{all} is import of everything into the country (Lipin, & Polyakova, 2014).

The sectoral orientation of mutual trade was determined by means of Grubel-Lloyd's index calculation (3):

$$GL_{cd,i} = 1 - \frac{|X_{cd,i} - M_{cd,i}|}{X_{cd,i} + M_{cd,i}}, \quad (3)$$

where $X_{cd,i}$ is export of commodities of the branch i from the country c into the country d ,

$M_{cd,i}$ is import of commodities of the branch i of the country c from the country d (Grubel, & Lloyd, 1971).

The index can have the values from 0 to 1; the closer the index value to 1, the bigger role the intrabranched trade plays between the countries:

- if the index is 1, the trade between the countries is completely intrabranched;
- if the index is 0, the trade between the countries is interbranch.

The classification of aggregated indexes according to the large groups of the product range of foreign economic activity gives the additional information of the branch trade. When characterizing the sectorial trade, the intrasectoral and intersectoral analyses were performed that show the level of cooperation between the particular sectors in the countries-members of the EEU.

A number of regression models were made to estimate the impact of the particular indexes of the foreign trade of agricultural products on the economic development of the region, where the gross regional product was the resultative characteristic and the export of products of the agroindustrial complex of the West Kazakhstan Region to the EEU countries and the import of products of the agroindustrial complex from the EEU countries, foreign trade turnover of the region with the EEU countries were the independent characteristics. The model parameters were estimated using the least square method. The process of modeling was performed in the MS Excel program shell. During the research, all stages of the paired regression analysis were passed, i.e. collection and processing of data, building of paired regression, quality check of the model and coefficients of regression, and results interpretation (Hendry, & Clements, 2002). For forecasting, the data extrapolation method by analytical leveling was used (Kremer, & Putko, 2010) as well as the forecasting methods of dynamic and structural characteristics (Shirov, &

Gusev, 2013).

The readiness of the West Kazakhstan Region for the integration processes was determined by the calculation of the region integration effect (RIE) as the difference of the values of gross regional product and the items of expenditures of the regional budget for the period of 2005-2015. An important value is also the efficiency of the region development under intensification of the integration processes (RIE) that is the relation of the integration effect index in the items of expenditures of the regional budget (Grentikova, 2008).

3. Results

3.1 Impact of integration processes on the economic development of region

For the cross-border region that participates actively in the economic integration, the definition of the reaction degree of economy and its particular intrabranh complexes to this process is important. For this purpose, the regression analysis has been performed the results of which are shown in Table 1.

Table 1
Results of regression analysis

| No | Independent variable | Regression equation | Determination coefficient R ² |
|----|---|--|--|
| 1 | Export to EEU countries | $Y = -55,642 + 0.194x - 0.0009x^2 - 0.008x^3$ | 0.68 |
| 2 | Import from EEU countries | $Y = 497,606 + 1.947x - 0.0049x^2 + 0.022x^3$ | 0.82 |
| 3 | Foreign trade turnover with EEU countries | $Y = -553,247 + 2.141x - 0.0049x^2 + 0.022x^3$ | 0.84 |

The main purpose of the regression analysis is to determine the analytical form of relation in which the change of the resultative characteristic (gross regional product) is stipulated by the impact of one factor characteristic; in our case, these are the indexes of export and foreign trade turnover, and many other factors that also impact the resultative characteristic are accepted as the constant and average values. A correlation field was built for every dependence, i.e. the aggregate of points of the resultative and factor characteristics. On its base, the hypothesis of the nonlinear relation form was advanced. Using the methods of linearization, different types of nonlinear equations were considered; parabolas of the third order were of the best quality. The determination coefficient was accepted as the main index of the selection accuracy of the regression equation, i.e. in 68-84% cases, the changes of the considered variables led to the change of the resultative characteristic.

According to the Student's criterion, all revealed values of the regression coefficient are statistically significant. The empiric regression coefficients are just the estimations of the theoretical coefficients and the equation itself reflects only the general tendency of behavior of the considered variables. Moreover, the parabolas of the third order are difficult to interpret economically. Therefore, we will assume that the impact of considered indexes is significant and it is expressed in the form of the revealed equations.

Then we calculated the parameters of the trends' equation obtained using the method of analytical equation (Figures 1-3).

Figure 1

Export trend of the agroindustrial complex of the West Kazakhstan Region into the EEU countries

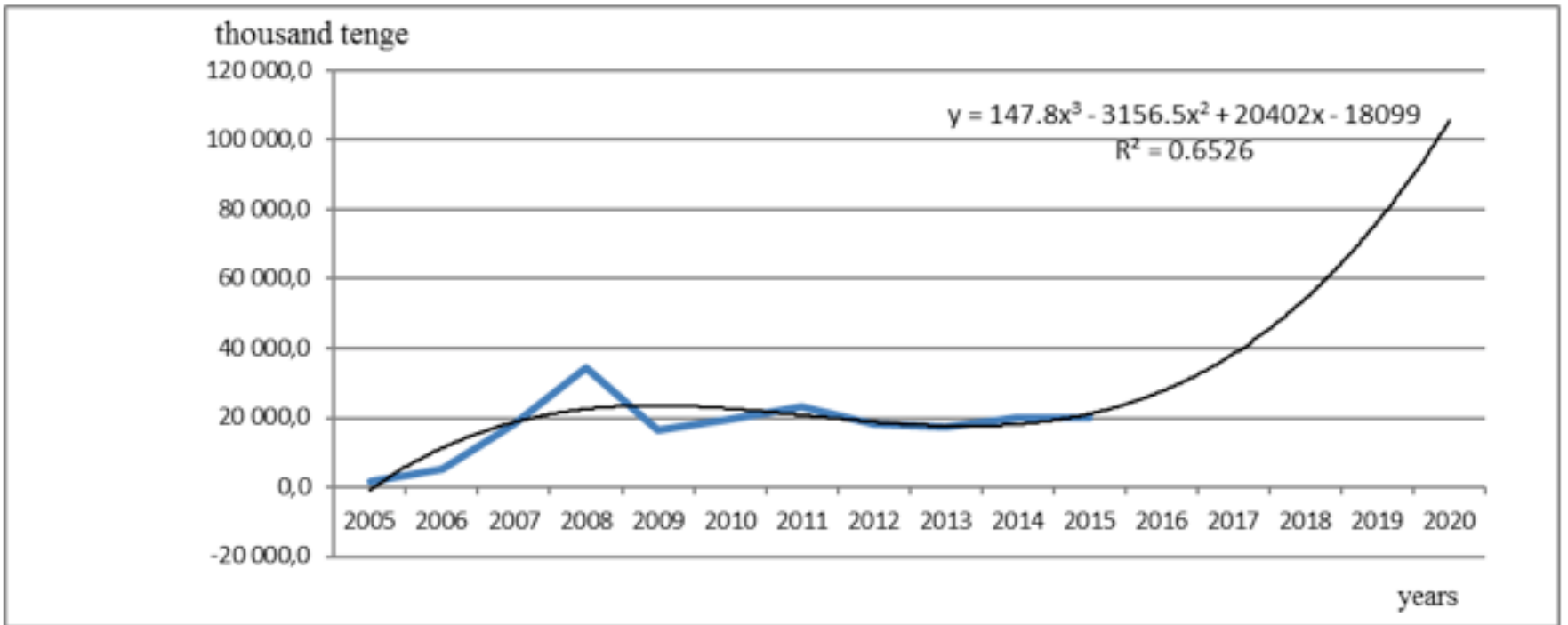


Figure 2

Import trend of agroindustrial complex of the West Kazakhstan Region from the EEU countries

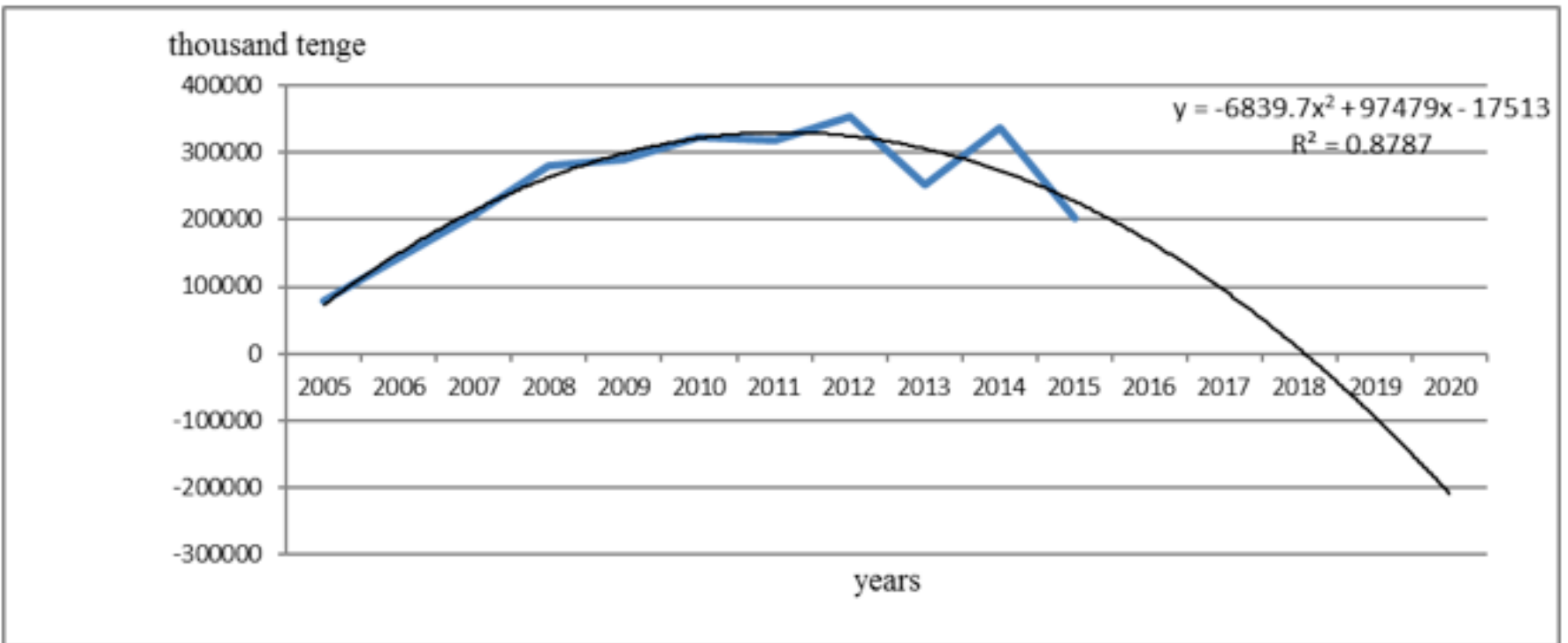
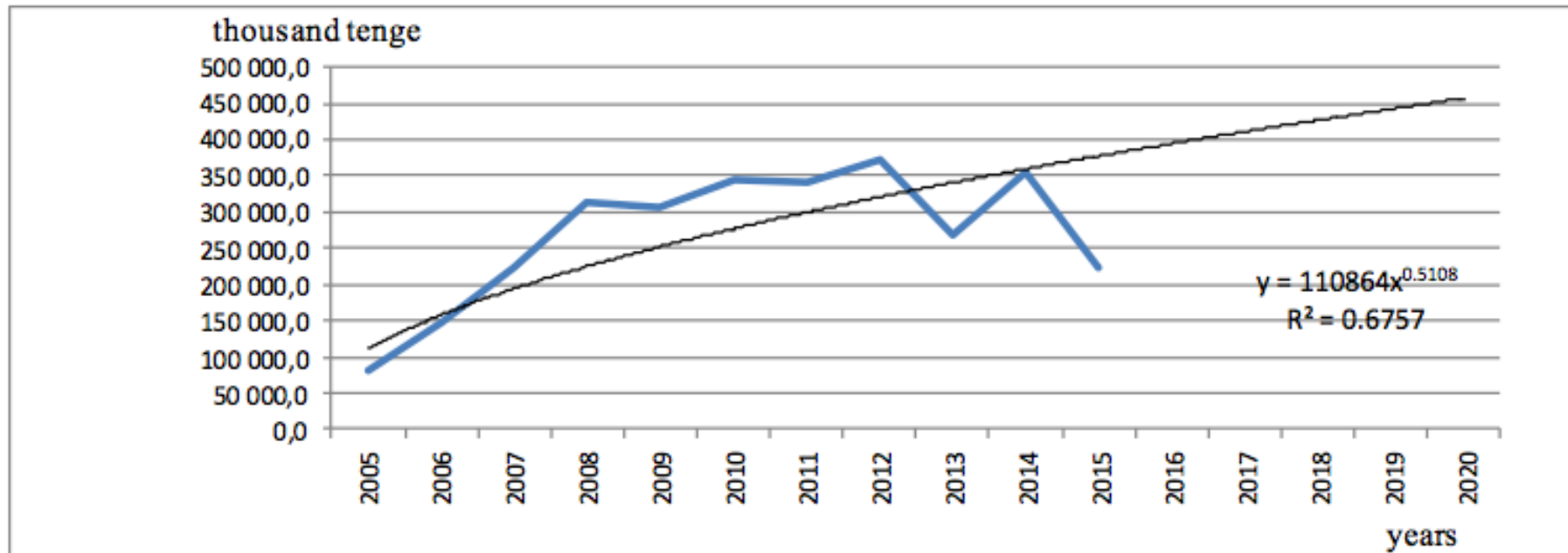


Figure 3

Foreign trade turnover trend of the agroindustrial complex of the West Kazakhstan Region with the EEU countries



For the previous period of 2005-2015, we can observe deviations in the direction of increase as well as in the direction of decrease in the index values. However, there is a sustainable tendency of growth for all the indexes. Therefore, the forecast for the export and foreign trade turnover of the products of the agroindustrial complex of the West Kazakhstan Region till 2020 is positive, and the forecast of import is negative. The polynomials of the 4th and the 3rd degree are the most suitable for description of the tendencies of the rows of export and import, and for the rows of the foreign trade turnover they are power functions. The indexes of forecast quality within the range of 0.62-0.73 give sufficient grounds for the acceptance of the result of analysis. The participation of Kazakhstan in the EEU will enable the West Kazakhstan Region to extend the potential sales markets for the further development of the branches that are wealthy now (grain farming, stock farming, and meat industry) as well as the restoration the production of some agricultural products (vegetables, fruits) and this will be a powerful factor of the social and economic development of the region and the extension of the competitive field (Tarshilova, 2014).

It should be mentioned that the intensification of the integration processes can be a particular threat to the competitiveness of the agroindustrial complex of the region; there is a possibility of the growth of the problem of industrial safety at the expense of the interference of the import food products. In its turn, the decrease in the share of national manufacturers in the internal market will affect the employment in the branches of the first and the third fields of the agroindustrial complex. The most vulnerable are the branches of the food industry of the region that are characterized by a weak material and technical base, the high wear of the equipment and the outdated technology (Zinina, 2015).

3.2 Forecast of efficient development of region under integration

The interpretation of the regression equations demonstrates the possibility of the increase in the gross regional product due to the growth of products' export of the agroindustrial complex and the foreign trade turnover. According to the above described method, the readiness of the economy of the West Kazakhstan Region for the integration conditions was calculated (Table 2).

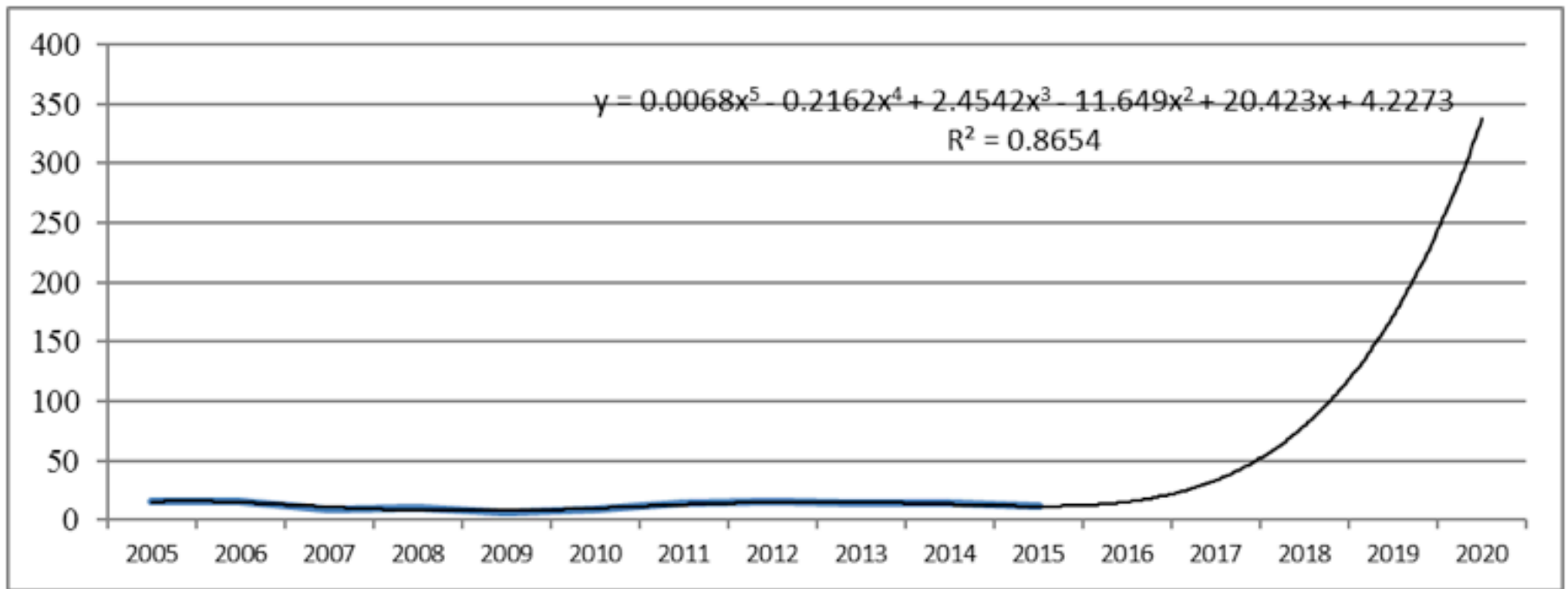
Table 2
Efficient development of the West Kazakhstan Region in the integration conditions

| Year | GRP, bln tenge | Expenditures of the West Kazakhstan Region, bln tenge | Ecr, bln tenge | ERc |
|------|-------------------|---|----------------|------|
| 2005 | 401.11 | 24.70 | 376.41 | 15.2 |

| | | | | |
|------|----------|--------|----------|-------|
| 2006 | 512.32 | 31.50 | 480.82 | 15.3 |
| 2007 | 617.69 | 58.33 | 559.36 | 9.6 |
| 2008 | 826.55 | 73.24 | 753.31 | 10.3 |
| 2009 | 822.98 | 102.24 | 720.74 | 7.0 |
| 2010 | 1,048.78 | 105.44 | 943.34 | 8.9 |
| 2011 | 1,358.39 | 91.18 | 1,267.21 | 13.9 |
| 2012 | 1,762.70 | 106.86 | 1,655.84 | 15.5 |
| 2013 | 1,780.55 | 119.16 | 1,661.40 | 13.9 |
| 2014 | 1,987.71 | 134.84 | 1,852.87 | 13.7 |
| 2015 | 1,709.95 | 137.48 | 1,572.47 | 11.4 |
| 2016 | 1,949.28 | 155.23 | 2,514.96 | 21.6 |
| 2017 | 2,064.79 | 164.87 | 2,961.10 | 42.8 |
| 2018 | 2,177.82 | 174.33 | 3,486.38 | 92.9 |
| 2019 | 2,288.61 | 183.62 | 4,104.84 | 191.1 |
| 2020 | 2,397.34 | 192.76 | 4,833.01 | 362.6 |

The tendency of the index growth of the RIE is observed during the considered period (4 times). At the same time, the efficiency of the development of the region in the conditions of intensification of the integration processes differs by its irregularity that is stipulated by the significant growth of the regional expenses since 2009 but the average indexes of the efficiency have positive dynamics. As it is seen from the data obtained, the West Kazakhstan Region is ready for integration conditions; the GRP covers all the expenses provided in the budget of the region. Also, in the midterm perspective the growth of the effect value according to the diagram of the polynomial of the fifth degree (Figure 4) is expected despite the fact that the efficiency of the development of the region shows the slow growth during the analyzed period.

Figure 4
Model of efficiency forecast of region
development under integration



The performed calculations show the positive impact of integration on the processes of the agroindustrial complex formation and the economic development of the region in general. The formation of the EEU helped the strengthening of economic relations between the countries-members and that was reflected in the growth of the aggregated indexes of the mutual trade connected with the impact of the integration processes (reorientation to the markets of the neighboring states due to the change of the customs tariff regulation) (Eurasian Economic Commission, 2016)

4. Discussion

4.1 Characteristics of regional agriculture

The agroindustrial complex is one of the leading intrabranched subsystems of the regional economy. The agroindustrial complex is formed on the basis of the activity of private subsidiary farms, private and state enterprises producing agricultural products and processing raw materials, storage and transportation of raw materials and finished products, government agencies controlling the processes of production flows from the manufacturer to the consumer including the quality control of the food products and protection of consumers' and manufacturers' rights at the local, republican and international levels.

The branch structure of the agroindustrial complex can be represented in the form of the function of the particular components, and their maturity changes depending upon the specific character of the complex at the regional and republican levels that is characterized now by the insufficient degree of diversification. The complexing core of the agroindustrial complex is agriculture; its share is 6.5% of the total products of the gross regional product and 74.9% of the total manufactured products of the agroindustrial complex (Statistics Department of the West Kazakhstan Region, 2016).

Agriculture is the leading branch of the agroindustrial complex; it uses 13,907.3 thousand hectares of agricultural resource lands, which is almost 92% of the territory of the region (15,019.3 thousand hectares). The agricultural lands include 518.4 thousand hectares or 4.4% of tilled soil, 1,224.6 thousand hectares or 8.8% of hayfields and 11,025 thousand hectares or 79.2% of pasture lands, distributed non-uniformly around the territory of the region. The non-uniform distribution of the agricultural lands is connected to the differences of the natural conditions of the parts of the region.

The agriculture of the region has a stock and plant farming specialization, a share of stock farming is 60% of the gross regional product. All the branches of the cattle breeding demonstrate the growth of livestock (Table 3) (Kazakhstan's regions, 2016).

Table 3
Livestock of cattle and poultry, thousand animals

| Indexes | Years | | | | | | |
|--------------------|-------|-------|-------|-------|---------|---------|---------------------------------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2015, % in comparison with 2010 |
| Cattle, including: | 420.8 | 379.1 | 390.4 | 417.2 | 456.2 | 469.0 | 111.6 |
| cows | 162.3 | 153.0 | 168.8 | 188.6 | 205.3 | 220.1 | 135.8 |
| horses | 71.9 | 80.3 | 90.5 | 103.2 | 116.9 | 131.1 | 184.5 |
| sheep and goats | 842.0 | 847.6 | 882.5 | 959.8 | 1,075.4 | 1,126.3 | 133.7 |
| pigs | 27.4 | 22.6 | 25.1 | 26.0 | 25.0 | 25.8 | 95.5 |
| poultry | 956.5 | 890.0 | 866.2 | 931.8 | 937.0 | 845.2 | 98.4 |
| camels | 3.5 | 3.2 | 3.0 | 2.9 | 2.9 | 2.8 | 93.3 |

The most part of the stock breeding is manufactured in the private subsidiary farms as in the institutional environment of the agroindustrial complex the number of private subsidiary farms prevails and it is 94.7% of the total number of entities of the complex. Due to this, the prevailing of the products of the private subsidiary farms in the structure of the gross output of stock products remains, and it is about 57% of the total volume of output. Such a tendency becomes the problem of small commodity production for the regional agroindustrial complex, and this impacts negatively the competitiveness of the regional products in the republican and international markets.

The livestock growth helped to increase the livestock production (Table 4).

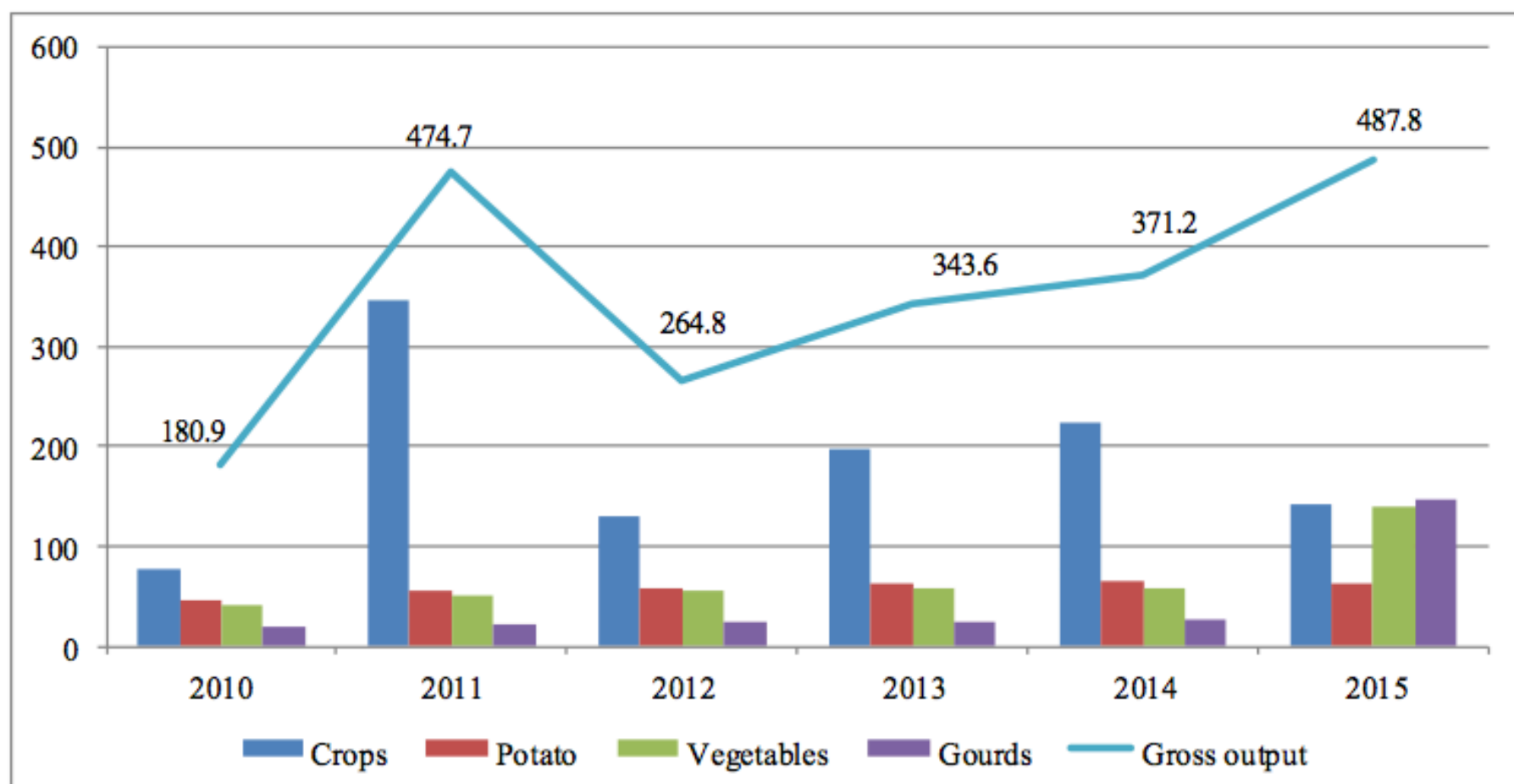
Table 4
Livestock products' production

| Indexes | Years | | | | | | |
|--|-------|------|------|------|------|------|---------------------------------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2015, % in comparison with 2010 |
| Meat (slaughter weight), thousand tons | 76.9 | 77.5 | 73.5 | 73.5 | 73.4 | 77.5 | 100.7 |
| Meat (live weight), | | | | | | | |

| | | | | | | | |
|---------------------|-------|-------|-------|-------|-------|-------|-------|
| thousand tons | 37.8 | 38.0 | 35.8 | 36.7 | 36.8 | 38.9 | 102.9 |
| Milk, thousand tons | 237.5 | 226.7 | 223.6 | 224.7 | 224.6 | 225.9 | 95.1 |
| Eggs, mln pcs. | 130.8 | 137.4 | 136.2 | 139.7 | 156.6 | 149.7 | 114.5 |

The base of the development and distribution of plant farming is the production of crops. The structure of the gross yield distinguishes the food crops – spring wheat (63%), winter wheat (10.2%), winter rye (2.7%), cereal crops – panic grass and buckwheat (4.1%), and grain fodders – barley (21.3%). Crop yield differs significantly depending upon the district of the region. In the subzone of the dry steppe, it is 8.6 hundredweight/hectare and in the southern districts it reaches 2-5 hundredweight/hectare. The highest (more than 11 hundredweight/hectare) yield is typical for the districts located in the subzone of the moderate dry steppe. Among other agricultural crops, significant lands are used for potato, vegetables, and gourds. The dynamics of the gross output of the main plant products is shown in Figure 5.

Figure 5
Dynamics of gross output of main plant products, thousand tons



4.2 Development of processing branches of agroindustrial complex

There are nine large and medium-sized enterprises, 73 small enterprises, 164 mini-workshops are engaged in the field of agricultural raw material processing as well as 38 bakeries, 33 mills,

11 pasta making workshops, 15 sausage making workshops. Under integration, the role of the processing link of the agroindustrial complex is growing because in the international market finished products are more competitive as the food safety of the population is the primary task of every state. The production dynamics of the processing branches demonstrates also the growth of meat products and bakery goods at the significant decrease in dairy production (Table 5).

Table 5
Agricultural products processing, thousand tons

| Indexes | Years | | | | | | |
|---------------------------|-------|------|------|------|------|------|---------------------------------|
| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2015, % in comparison with 2010 |
| Meat and sausage products | 5.1 | 6.4 | 8.8 | 9.5 | 8.2 | 6.3 | 123.5 |
| Dairy products | 3.1 | 4.3 | 2.4 | 2.4 | 2.4 | 1.0 | 32.3 |
| Flour and paste products | 98.1 | 94.0 | 81.3 | 98.1 | 85.9 | 86.9 | 98.7 |
| Bread and confectioneries | 20.2 | 21.5 | 17.1 | 21.5 | 27.1 | 29.4 | 147 |

The modern level of development of the agricultural enterprises cannot be considered sufficient due to the reduction in production, deterioration of quality of agricultural raw materials, out-of-date industrial equipment (depreciation of fixed assets reaches 40-50%) and the lack of production facilities, complicated by the disruptions of supplies due to the unstable raw zones. The production of manufacturing equipment is represented by repair enterprises and small plants manufacturing agricultural equipment and spare parts for them; they take only 11% in the structure of the agroindustrial complex. Infrastructure is a narrow link due to the undeveloped road system, elevators, storage, warehouses, and refrigerators. As a result, there are big losses of the agricultural products during storage and transportation, up to 10-15% of the gross product. Therefore, there is a necessity to improve the branch structure taking into account the formation of the mechanism of market economic relations that presupposes the use of the target approach when the initial component is the final purpose – to increase the volumes, to improve the quality and range of the finished products by means of the improvement of the economic relations of the participants in the agroindustrial production.

All links of the agroindustrial complex shall be oriented towards the provision of the optimal balance and proportionality between the stages of the agroindustrial production according to the production resources, volumes of production and rates of development.

4.3 Engagement of the regional agroindustrial complex into integration processes

Possessing sufficient natural resources and social and economic potential the agroindustrial complex provides the needs of the region in agricultural production and is capable to supply a part of products to the external market, first of all, into the cross-border regions of the

countries-members of the EEU. Since the formation of the EEU, the regional agroindustrial complex participates actively in the integration processes (Table 6).

Table 6
Integration indexes in the market of goods, services and labor in the West Kazakhstan Region

| Year | Commodity market | | Service market | | Labor market | |
|------|---|-----------------------------------|---|-----------------------------------|-----------------------------|---|
| | Index of mutual transparency of economy | Importance factor of mutual trade | Index of mutual transparency of economy | Importance factor of mutual trade | Balance of migration inflow | Importance factor of migration with EEU countries |
| 2010 | 3.39% | 0.14% | 0.11% | 0.1% | -1.4 | -0.10% |
| 2011 | 6.21% | 0.04% | 0.71% | 0.02% | -1.7 | -0.14% |
| 2012 | 5.91% | 0.05% | 0.61% | 0.01% | -1.4 | -0.13% |
| 2013 | 5.83% | 0.04% | 0.63% | 0.01% | -0.6 | -0.10% |
| 2014 | 5.40% | 0.02% | 0.88% | 0.03% | -1.5 | -0.12% |
| 2015 | 3.56% | 0.03% | 0.4% | 0.015% | -0.5 | -0.08% |

Since the foundation of the Customs Union with Russia and Belarus in 2010, the West Kazakhstan Region was one of the first regions that saw the changes due to its cross-border position with the Russian Federation. The first years of integration had a positive impact on the indexes of the foreign trade and mutual trade of the region. In 2011, the growth of the mutual transparency of the regional economy regarding the trade of goods and services was 54% and 15.4% correspondingly. However, in 2012 there was a tendency of a sustainable decrease in indexes because at every new stage of integration there were certain problems and obstacles that had a negative impact on the development of integration relations (Pelipas *et al.*, 2014). For the West Kazakhstan Region, the main problem was a weak organization of the processing facilities in the region because it was impossible to compete with successful agroindustrial enterprises of Russia and Belarus and, consequently, the market was filled with imported agricultural products that influenced negatively the regional balance of trade.

The foreign trade turnover of the West Kazakhstan Region with the Russian Federation and the Republic of Belarus for 2013 was 806.5 mln US dollars. It was 27.4% above the level of 2012 (in 2012 the trade turnover was 633.2 mln dollars). The export deliveries from the Russian Federation and the Republic of Belarus were 59.3 mln dollars that was 12.5% above the level of 2012 (in 2012 the export deliveries were 52.7 mln dollars). The import revenues of the Russian Federation, the Republic of Belarus increased by 28.7% in comparison with 2012 and were 747.2 mln dollars (in 2012, the import deliveries were 580.4 mln dollars). A share of the Russian Federation in the total volume of commodity turnover is 91%. It is stipulated by the availability of the cross-border position of the West Kazakhstan Region with the regions of Russia and this decreases the expenditures for the logistic and transport costs and excludes the import-export payments within the frameworks of the EEU.

4.4 Foreign trade turnover of the West Kazakhstan Region

Despite the qualitative increase in the foreign trade turnover, import prevailed in the trade structure that had a decreasing effect of the mutual transparency of the economy in the market of goods and services beginning from 6.21% in 2011 to 3.56% in 2015. But, in our opinion, it is a positive tendency to some extent, as the dynamics in the direction of the increase in the factor of importance of the mutual trade is observed; in its turn, this means the partial reorientation of the regional market to the market of the countries-members of the EEU due to the simplification of the trading relations inside the integration association. In 2013-2015, the decrease in the indexes of the mutual transparency of the economy in the market of goods and services remained and the tendency of the increase in the mutual trade with the countries of the EEU was observed (Eurasian Economic Commission, 2016). The process of involvement of the region into the integration relations was rather positive and there were positive impulses for the development of the agroindustrial branches within the frameworks of integration.

The active position of the foreign trade of the country distinguishes the West Kazakhstan Region from the other regions of Kazakhstan. According to the official customs statistics for 2015, the trade turnover of the West Kazakhstan Region was 9.6 bln US dollars and the foreign trade turnover with the EEU countries was 806.5 mln US dollars. It was 27.4% above the level of 2014 when the trade turnover was 633.2 mln US dollars. The regional turnover with the EEU countries was 8%. Despite all preferences within the framework of the EEU, this index was rather low. It is explained by the fact that the West Kazakhstan Region is an industrial region and the export of products of the fuel and energy complex takes a significant share in its export commodity structure, and this is stipulated to a large extent by the demand of the third countries, other than the states-members of the EEU (Table 7).

Table 7

The main commodity structure of the total foreign trade turnover of the West Kazakhstan Region for 2015, thousand US dollars

| No. | Name of commodity group | Export | Import |
|-----|--|-------------|-----------|
| | TOTAL, including: | 8,284,336.6 | 455,581.5 |
| 1 | Products of animal and plant origin , finished food products | 7,291.6 | 105,224.1 |
| 2 | Mineral products, including: | 8,239,581.8 | 2,001.2 |
| 3 | Fuel-energy products | 8,239,581.8 | 1,275.7 |
| 4 | Machines, equipment, transport vehicles, devices and apparatus | 13,960.0 | 153,686.3 |

The import of machines, equipment (devices and apparatus) and the products of animal and plant origin prevails in the commodity structure. The export deliveries into the EEU in 2015 were 59.3 mln dollars, which was 12.5% above the level of 2014 – 52.7% mln dollars. The import deliveries from the EEU in 2015 increased by 28.7% in comparison with 2014 and were 747.2 mln dollars. In 2014, the import deliveries were 580.4 mln dollars. Oil products and metals prevail in the export commodity structure of the West Kazakhstan Region into the EEU countries. Despite the significant increase in the indexes of export and import volumes in 2015, the structure remains unchanged, i.e. the region is still import dependent. This is explained by the raw material orientation of the state policy and the absence of the enterprises of

technological production equipment in the region as well as a low share of processing enterprises of plant growing and cattle-breeding raw material. This, in its turn, has a negative impact on the development of the agroindustrial complex as processing organizations are one of the basic elements of the interbranch complex. Besides, there is a problem of price and qualitative non-competitiveness of the products of the agroindustrial complex of the West Kazakhstan Region in the local market due to the presence of a large range of agrofood products of Russia.

4.5. Share of agroindustrial products in structure of regional foreign trade turnover

A share of agroindustrial products in the total structure of the foreign trade turnover of the region with the countries-members of the EEU is 24%. During the first period of development, the integration had a significant positive impact on the indexes, which was stipulated by the pressure of import of the agroindustrial products into the domestic market. The performed analysis showed that the degree of intensiveness of the integration processes to a large extent varied depending upon the types of products: the effects were better seen in the trade of food products and agricultural raw materials. According to these enlarged commodity groups, there was an effect of reorientation of the trade from the third countries to the partners of the EEU.

When estimating the efficiency of participation of the agroindustrial complex in the integration processes, the branch structure of trade is taken into account. The important characteristic of the sectoral trade is the analysis of intersectoral and intrasectoral trade that shows the level of cooperation between the separate sectors in the countries-members of the EEU (Ito, & Okubo, 2012). According to the calculated Gruber-Lloyd's index, the interbranch trade of the region of the enlarged group "Food products and agricultural raw materials" with the countries-members of the EEU for 2012-2015 was typical for Armenia (, in other countries the intersectoral trade was observed. The highest index of the intersectoral trade was typical for the Republic of Belarus (This tendency will continue in the future.

Thus, the agroindustrial complex of the West Kazakhstan Region plays the key role in the development of the relations under integration. To improve the structure of the trade turnover in the direction of export-orientedness it is necessary to speed up the process of development of the enterprises processing the agricultural raw material and increase the production of finished products up to the level of import phase- out of the products in the region and in the country, creating the conditions for the entrance of the markets of the neighboring and foreign states.

5. Conclusion

Cross-border cooperation plays an important role in the economic stability for the agroindustrial complex of the West Kazakhstan Region. In its turn, the region contributes to the provision of the food safety of the neighboring countries. This cooperation enables the small and medium business of the region to provide the larger competitiveness of the products, entrance of the products to the external markets that opens the new sales markets for the products for the enterprises of the West Kazakhstan Region, making it possible to cooperate without obstacles with the main trading partners because it presupposes the cancellation of all types of control on the internal borders and free movement of the goods and transport.

The conditions of integration give new impulses for the development of the agroindustrial complex as they open the large markets and channels of sale of the regional products. The increase in the volumes of demand in the international markets will create the conditions for the extensive and intensive growth of products and that will impact favorably the development of the regional agroindustrial complex and integration relations exemplified by the functioning of the EEU.

In the future, the agroindustrial complex of the region will face the necessity of further structural changes caused by the intensification of the integration processes in the region. This is connected to the increase in the competitiveness of the products of the agroindustrial complex due to the increase in the efficiency and sustainability of the agrarian production, modernization of branches processing agroindustrial raw materials, and improvement of the product quality. In its turn, the improvement of the investment attractiveness of branches, implementation of the state support programs of the agricultural business, development of information support of the data bases of the functioning of the international and domestic markets, liberalization of the trade relations will create the necessary conditions for integration of the enterprises of the agroindustrial complex into the international markets.

The further research will presuppose the development of recommendations of the export potential development of the agroindustrial complex, in particular: recommendations of coordination of the sales and marketing policy; recommendations of the agreed actions of the states-members in the field of development of export potential; recommendations of the agreed export policy on the certain commodity items.

References

- Eurasian Economic Commission. (2016). *Agropromyshlennaya politika Evraziiskogo ekonomicheskogo soyuza* [Agroindustrial policy of the Eurasian Economic Union]. Moscow: EEC. (p. 72).
- Eurasian Economic Commission. (2016). *Svodnyi obzor o merakh i mekhanizmaxh podderzhki eksporta selskokhozyaistvennoi produktsii i prodovolstviya, primenyaemykh v gosudarstvakh-chlenakh Evraziiskogo ekonomicheskogo soyuza, a takzhe mirovoi opyt primeneniya takikh mer* [Summary Report of Measures and Mechanisms of Export Support of Agricultural Products Applied in the Countries-Members of the Eurasian Economic Union and also the World Experience of Such Measures Application]. Moscow: EEC. (p. 72).
- Francois, J., Manchin, M., Norberg, H., Pindyuk, O., & Tomberger, P. (2013). *Reducing Transatlantic Barriers to Trade and Investment: An Economic Assessment*. Project Report prepared under implementing Framework Contract TRADE10/A2/A16. Centre for Economic Policy Research.
- Francois, J., van Meijl, H., & van Tongeren, F. (2003). *Economic Benefits of the Doha Round for the Netherlands*. The Hague: Agricultural Economics Institute.
- Francois, J.F., Sunesen, E.R., & Thelle, M.H. (2010). *Assessment of Barriers to Trade and Investment Between the EU and Japan* (TRADE/07/A2). Report prepared for European Commission, Directorate-General for Trade. Copenhagen Economics.
- Grentikova, I.G. (2008). Teoreticheskie aspekty globalizatsii [Theoretical Aspects of Globalization]. *Vestnik Orenburgskogo gosudarstvennogo universiteta*, 8(90), 4-9.
- Grubel, H.G., & Lloyd, P.J. (1971). The Empirical Measurement of Intra-Industry Trade. *Economic Record*, 47(4), 494-517.
- Hendry, D., & Clements. M. (2002). *Economic Forecasting: Some Lessons from Recent Research*. Oxford. Retrieved September 5, 2017, from <http://www.ecb.int/pub/wp/ecbwp082.pdf>
- Ito, T., & Okubo, T. (2012). *New Aspects of Intra-industry Trade in EU Countries*. IDE Discussion papers, No. 361.
- Ivanter, V.V., & Geets, V.M. (2012). Otsenka narodnokhozyaistvennykh posledstviy sozdaniya Edinogo ekonomicheskogo prostranstva i prisoedineniya k nemu Ukrainy [Estimation of Macroeconomic Consequences of Formation of the Common Free Market Zone and Ukraine Joining It]. *Problemy prognozirovaniya*, 3, 3-28.
- Kee, H., Nicita, A., & Olarreaga, M. (2009). Estimating Trade Restrictiveness Indices. *Economic*

Kremer, N.Sh. (Ed.). (2010). *Ekonometrika: uchebnik dlya studentov vuzov* [Econometrics: Textbook for Students] (3rd ed., revised and enlarged). Moscow: YUNITI-DANA. (p. 328).

Lipin, A.S., & Polyakova, O.V. (2014). Otsenka integratsionnykh protsessov v edinom ekonomicheskom prostranstve na primere torgovli tovarami [Estimation of Integration Processes in the Common Free Market Zone Illustrated by Commodity Trade]. *Praktika integratsii EEI*, 1(22), 80-96.

Pelipas, I.V., Tochitskaya, I.E., Shimanovich, G.I., & Anisimov, A.M. (2014). Otsenka vliyaniya netarifnykh barerov na vzaimnyu torgovlyu v EEP na osnove oprosa predpriyatii eksporterov [Estimation of Impact of Non-Tariff Barriers on Mutual Trade in the Common Free Market Zone Based upon the Inquiry of Exporters]. *Evraziiskaya ekonomicheskaya integratsiya*, 4(25), 16-23.

Regiony Kazakhstana: stat. sb. [Kazakhstan's Regions: Collected Works]. (2016). Astana. (p. 420).

Shuirov, A.A., & Gusev, M.S. (2013). Prognozirovanie dinamicheskikh i strukturnykh kharakteristik razvitiya edinogo ekonomicheskogo prostranstva [Forecasting of Dynamic and structural Characteristics of Development of the Common Free Market Zone]. *Problemy prognozirovaniya*, 3, 3-15.

Statistics Department of the West Kazakhstan Region. (2016). *Sotsialno-ekonomicheskoe razvitie Zapadno-Kazakhstanskoi oblasti: stat. sb.* [Social and Economic Development of the West Kazakhstan Region: Collected Works]. Uralsk. (p. 104).

Tarshilova, L.S. (2014). Teoreticheskie voprosy razvitiya integralnoi agroprodovolstvennoi sistemy regiona v usloviyakh territorialnogo razdeleniya truda [Theoretical Questions of Development of Integral Agrofood Regional System under Territorial Labor Division]. *Vestnik KazNU im. Al-Farabi, seriya ekonomicheskaya*, 4, 76-85.

UNCTAD. (2012). *Classification of Non-Tariff Measures*. UNCTAD/DITC/TAB/2012/2. Washington DC.

Yakovleva, E.A., Bezrukova, T.L., Rakhman, H.A., Tzyan Djaosya, & Davlatov, K.K. (2009). Tranzitivnost agroprodovolstvennoi sfery v usloviyakh globalizatsii mirovoi ekonomiki [Transitivity of Agrofood Field under Globalization of the World Economy]. *Sovremennye problemy nauki i obrazovaniya*, 1, 72.

Zinina, L. (2015). Territorialnaya agroprodovolstvennaya sistema: priority i mekhanizm innovatsionnogo razvitiya [Territorial Agrofood System: Priorities and Mechanism of Innovation Development]. *Problemy teorii i praktiki upravleniya*, 9, 17-28.

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