
Agro-Industrial Complex in the Economic Policy on Belarus

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Abstract:

Purpose: The study aims to verify two hypotheses: 1) in Belarus, the agri-food complex does not exist in the conceptual understanding of the economic complex, 2) the branches of the agri-food sector do not have a significant impact on the economic growth.

Design/Methodology/Approach: The analysis of dynamics, structure, correlation, and regression were chosen as research methods. The initial data for the study were the materials of official statistics, state programs of socio-economic development.

Findings: In Belarus, the agro-industrial complex (referred to as the AIC) is an object of state control and is positioned as a factor in the country's economic growth. The article clarifies the category "agro-industrial complex," shows the methods of policy in the AIC and the place of this complex in the structure of the Belarusian economy. The issue was identified, the AIC as a structural unit of the economy and an object of public administration does not have an unambiguous interpretation. Its boundaries are not delineated. It is shown that the state policy in the field of the AIC does not cover the economic complex as integrity, but only two independent types of economic activity - agriculture and food production. Based on the analysis of management methods in the AIC, it was concluded that in Belarus, the AIC as an economic complex of interrelated industries, as a structural unit of the economy does not exist, and the use of the term AIC and its positioning as a locomotive of the state economy is erroneous. It is shown that the agro-food sector does not significantly impact the economic growth of Belarus.

Practical Implications: The research results can be used to adjust the state policy in the agri-food sector and substantiate the facts of economic growth.

Originality/Value: The article attempts to argue the incorrect positioning of the AIC as the most important economic complex in the national economy of Belarus.

Keywords: Economic policy, agro-industrial complex, structure, management, analysis, problems, economic growth.

JEL Classification: O11, O20, O40, P21.

Paper Type: Research study.

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1. Introduction

The agro-industrial complex of the Republic of Belarus is an intersectoral formation for producing agricultural products and bringing them to the consumer. The AIC unites different sectors connected by a common goal - to provide the population with food. It is believed that the AIC is the giant intersectoral formation in the structure of the Belarusian economy. The AIC is given the status of the most important sphere of the national economy. As a result, the AIC is the object of state management.

State programs are adopted and implemented, the purpose of which is to increase the efficiency of the AIC, which should lead to the recovery of the country's economy. Thus, the agro-industrial complex is considered a factor of economic growth in Belarus. In the course of this study, an attempt was made to dismantle this myth.

2. Literature Review

The formation of the AIC of Belarus began in the 70s of the XX century. To saturate the market with food, measures were taken to intensify the integration of agricultural enterprises with industrial enterprises. The genesis of the AIC of Belarus is associated with the history of the country, its political and economic transformations. The modern AIC of Belarus prototype was formed back in communism when Belarus was part of the USSR. In the contemporary history of Belarus as an independent state, the AIC is given the status of the most crucial object of state administration (Gusakov, 2015; Shimov, 2012). The formation of the modern economic model of Belarus began after gaining independence in 1993. That time was characterized by the absence of a specific agricultural policy. However, in 1996, the state initiated the reform and active regulation of the AIC through the development, adoption, and implementation of State programs (Table 1).

As shown in Table 1, state programs in the field of the AIC were developed every five years. Note that government programs are based on financial injections from budget funds. This shows that the AIC is an object of government control. The parameters of agro-industrial complex development are enshrined in state programs adopted by the Council of Ministers and decrees of the President of the Republic of Belarus. It should be canceled that state programs in the Republic of Belarus have the force of law and are binding. However, the content of the AIC, its sectoral composition, the subjects of the AIC are not fixed at the level of the law.

Any object of management should be characterized by a certain composition, boundaries, management bodies, results. Specification of the control object is a prerequisite at every management stage - planning, accounting, control, and analysis. Considering that the implementation of state programs is associated with budget financing, it isn't easy to assume that the boundaries of the object of financing itself have not been established. Thus, at the initial stage of the study, the problem of the

ambiguity of the composition of the AIC and the difficulty of assessing its results was revealed.

Table 1. Stages of state regulation of the agro-industrial complex of Belarus

Period	State program	Characteristics
1996	State program for reforming the agro-industrial complex ²	A market vector for the development of agriculture has been formed
2001–2005	State Program for the AIC improvement ³	Commitment to the intensification of agriculture and food industry
2005–2010	State program for the revival and development of the village ⁴	Commitment to the large-scale production and construction of agricultural towns
2011–2015	State program for sustainable rural development ⁵	Commitment to an improving the efficiency of the AIC and its export potential
2016–2020	State program for the agribusiness development ⁶	Commitment to an increasing the efficiency of the AIC

Source: Own elaboration.

Let's try to define the definitive boundaries of the AIC based on the analysis of literary sources. In a broad sense, the AIC is an inter-sectoral complex that unites sectors of the economy for the production and processing of agricultural raw materials and obtaining products from them, which, according to one opinion, unites from 10 to 80 sectors (Shimov, 2012), in another view, animal husbandry, plant growing and food industry (Krupich, 2006; Kireyenka *et al.*, 2019), in the third, animal husbandry, plant growing, fodder production and agricultural science (Ganush, 2016).

There is no (and therefore unambiguous in interpretation) composition of the agro-industrial complex set as the norm in Belarus. An ambiguity appears, the AIC is an object of management and financing, and its boundary is not clear enough.

In addition to the branches of the AIC, it is customary to distinguish three areas (Lemeshevskiy, 2012; Tobolich, 2017). The first area is the production of means of production for the AIC: agricultural engineering, mechanical engineering for light and food industries, fertilizers and plant protection products, microbiological industry,

²State program of reforming the agro-industrial complex of Belarus, the Collegium of the Cabinet of Ministers of Belarus dated 06.08.1996. Protocol No. 13. Minsk 1996.

³State Program for the improvement of the agro-industrial complex for 2001-2005. - Decree of the President of the Republic of Belarus of May 14, 2001, No. 256.

⁴State program of rural revival and development for 2005-2010 - Decree of the President of the Republic of Belarus dated March 25, 2005, No. 150.

⁵State Program for Sustainable Rural Development for 2011-15 - Decree of the President of the Republic of Belarus dated August 01, 2011, No. 342.

⁶State program for the development of agricultural business for 2016–2020. - Resolution of the Council of Ministers of Belarus dated March 11, 2016, No. 196.

rural construction, agricultural aviation, etc. The second area is agriculture. The third area is engaged in bringing agricultural products to the end consumer: food industry, part of light industry (using raw materials of agricultural origin), procurement, storage, transportation, trade in agricultural products (Gusakov, 2007). It is believed that 20% of agricultural products are produced in the I sphere, 50% in II, and 30% in III. There is information that the AIC has about 27% of gross output (of which the share of agriculture is 53.4%, the food industry - 22.7%, light industry - 2%, construction - 10.5%), the AIC forms the third part of the national income (Gusakov and Shpak, 2018).

The study raises doubts about the reliability of the described components of the AIC and the above indicators. These doubts are based on methodological problems that a researcher inevitably faces when assessing the elements of the AIC. While it is not difficult to determine crop and livestock production products, it is sometimes impossible to estimate the share of construction, light industry, or trade in the AIC. The system of product accounting at the macroeconomic level does not allow assessing either the spheres of the AIC or the AIC as a whole. In the most important strategic programs, the term AIC is mentioned many times.

However, it should be noted that at the level of state planning, the AIC is not considered an integral unit in the structure of the economy but is identified only with agriculture and the food industry. It follows from this that one of the management functions, planning, is not implemented in the AIC.

The methodology for implementing the following management stages - control, accounting, and analysis - for all structural units of the economy is developed by the Belarusian state statistics. However, statistical accounting reflects the economy's structure following the types of economic activity and not based on economic complexes. Economic complexes are not the subject of statistical accounting and analysis. From this, a conclusion follows that the AIC is not subject to control and accounting. On the understanding that public administration is understood as any activity for the practical implementation of the developed course, we can conclude.

At the stage of state planning for the AIC, target indicators (first of all, the production volume) are not determined. At the stage of accounting, the results of the AIC are not reflected. Belstat, as a government body, does not consider the AIC as a structural unit of the economy. Therefore, it is not possible to assess the place of the AIC in the economy based on the three-sector model of the agro-industrial complex proposed in the literature.

Consequently, the AIC of Belarus is an object of state administration and the most important part of the country's economy only at the declarative level. In reality, the AIC is understood only as agriculture and the food industry. The state implements managerial functions at the stages of planning, accounting, control, and analysis. In general, we can say that the concept of state strategic planning reveals the problem of

goal-setting: 1) lack of a clear understanding of the composition of the AIC; 2) the lack of parameters for the development of the AIC as for an intersectoral economic system.

The study of the most important documents that form the basis of the state economic policy shows that the AIC occupies an important place in Belarus's state management system. The AIC is positioned as a factor in the country's economic growth. Considering that the AIC is understood as two sectors of the economy - agriculture and the food industry, it is these sectors that are proclaimed as factors of the country's economic growth. Agriculture and food processing are considered to be the most integrated industries (Gusakov, 2007). To study the degree of integration between these industries, a correlation and regression analysis of the relationship between the growth rates of industries and the impact of agricultural growth rates on the growth rates of the food industry was made for the period 2000-19.

The results obtained show that a 1% increase in the growth rate in agriculture leads to an increase in the growth rate in the food industry by an average of 0.5%. The analysis did not reveal a high degree of integration, close systemic ties inherent in the economic complex, which would be indicated by a high or very high relationship between the factors. The analysis results show that for the period 2000-19, the variability of the growth rate of the food industry by only 25.8% was explained by the variability of the growth rate of agriculture. Based on the analysis results, we can conclude that the agriculture and food industry of Belarus do not reveal internal relationships and properties characteristic of economic complexes. Both agriculture and the food industry are elements of the economic complex, whose name is not the AIC but the national economy of Belarus.

3. Discussion

The study showed that the state had endowed agriculture and the food industry with the most critical sectors. To study the degree of influence of agriculture and the food industry on the economic growth of Belarus, the relationship between the GDP growth rates and the growth rates of agri-food branches was investigated. For the factor model to be verified as much as possible, a third factor was introduced, which is the aggregate growth rate of all sectors of the economy minus agriculture and the food industry. Using the method of correlation regression analysis, it was checked which of the variables makes the most significant contribution to the GDP growth rate. The following conclusions were obtained: an increase in the rate of growth of production in agriculture by 1% leads to a rise in the rate of change of GDP by 0.0613%; an increase in the growth rate of food products by 1% leads to a rise in the GDP growth rate by 0.0271%.

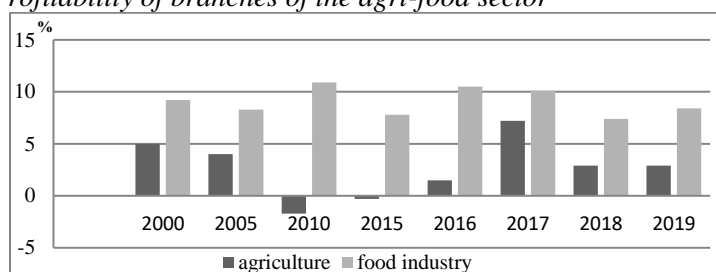
The state program of social and economic development until 2020 provides for an increase in livestock production in 2020 by 18.3% compared to 2015 and crop production by 9.3%. Consequently, taking into account the existing structure of agriculture, in which livestock breeding occupies 54% and crop production 46%, the

state has planned an increase in agriculture at the level of 14% for the five years, which corresponds to 1.7% of the annual growth. Based on the forecast indicators of the development of the industry and the resulting multiple regression model, it is easy to determine that if the hands of agricultural development are met, the republic will receive only 0.1% of GDP growth. As it can be seen, the branches of the agri-food sector do not significantly impact the economic growth rates of Belarus.

However, agriculture and food processing are unique industries. There are no other industries that can replace them. There is no human community that does not care about food. This process will always occur, even if Belarus takes a course towards decentralizing the agri-food sector one day. However, it should be recognized that today, when the republic is at the post-industrial stage of development, these sectors, while remaining factors in ensuring food security, are no longer factors of economic growth. There is an explanation for that.

In theory, industry specialization is understood as a higher level of industry concentration than other industries' average parameters. The field initiatives have a higher share of products, the presence of certain advantages in this industry (Minakir, 2019). In terms of their position in the structure of GDP, agriculture and the food industry are indeed among the leading sectors. In 2019, agriculture accounted for 6.8%, food industry 6.2% in the structure of GDP. The food industry has been the largest in the last decade. From the point of view of gross indicators, the specialization of the economy is justified, which cannot be said based on the criteria of economic efficiency (Figure 1).

Figure 1. Profitability of branches of the agri-food sector



Source: Own elaboration based on Belstat⁷.

It can be seen (Figure 1) that the profitability in agriculture was 2.9% in 2019, which is unstable; the highest level (7.2%) was reached in 2017. Higher financial results characterize the food industry; sales profitability fluctuated from 7.4% in 2018 to 10.9% in 2010. However, this can hardly provide opportunities for expanded reproduction in the industry.

⁷ Statistical yearbook "Agriculture of the Republic of Belarus – 2012, "Industry of the Republic of Belarus – 2020».

The level and dynamics of unprofitable organizations in the agri-food sector of Belarus are presented in Table 2.

Table 2. Share of unprofitable organizations, %

Industry of the agri-food sector of Belarus	Year							
	2011	2012	2013	2014	2015	2016	2017	2018
Agriculture (agricultural organizations)	1.4	1.5	13.6	13.3	34.9	27.9	15.7	17.9
Food industry	3.5	14.3	19.8	25.4	36.2	16.6	19.7	28.3

Source: Own elaboration based on Belstat¹⁴

Statistics show (Table 2) that in 2018 about 18% of agricultural organizations and 28% of food processing enterprises were unprofitable. In comparison with 2011, these indicators, despite active public administration, have significantly deteriorated. All this casts doubt on 1) sectoral advantages, based on which agriculture and the food industry can be considered factors of economic growth; 2) the effectiveness of state regulation of the branches of the agri-food sector in Belarus.

Among the indicators indicating the advisability of specialization, there may be the ability of the industry to influence the growth of export potential (Kotov, 2020). Let us consider the dynamics of foreign trade indicators in products of the agri-food sector of Belarus (Table 3).

Table 3. The volume of foreign trade in agricultural products and foodstuffs, mln.

Parameter	Year							Growth rate of 2019 to 2013,%
	2013	2014	2015	2016	2017	2018	2019	
Export	5782.6	5606.4	4483.0	4231.6	4971.2	5280.1	5576.8	95.8
Import	4181.1	4849.0	4448.4	4076.3	4583.8	4424.4	4655.8	111.1
Balance	1593.5	757.4	4.6	155.3	387.4	855.7	881.0	55.3

Source: Own elaboration based on Belstat.

As Table 3 shows, the export of agricultural products and food products amounted to \$ 5,576.8 million in 2019, 4.2% less than in 2013. Imports, on the contrary, increased over this period by 11.1% and amounted to 2019 4,655.8 million USD. As a result of noticeable differences in the growth rates of exports and imports, the structure of foreign trade in goods of the agri-food group worsened: the amount of the foreign trade balance, while remaining positive, nevertheless decreased by 44.7%, the share of the credit decreased from 16.0% in 2013 to 8.6% in 2019. The percentage in worldwide exports and imports shows the proportion a country has in global exports or imports. If a country's share in exports is constant or grows, it means that country maintains or strengthens its international competitiveness. Conversely, if the same is true for imports, it means the county becomes less competitive in the global market (Jankowska, 2021). The data in Table 3 indicate that Belarus is losing its competitive advantages in the agri-food sector.

In addition to economic criteria for efficiency, natural reasons make the reliance on the agri-food sector untenable. In Belarus, the resources of agricultural production are characterized by several limiting factors. Compared to European countries (Poland, Germany, France, etc.), crop production does not receive favorable temperatures. The fertility of a quarter of arable land is estimated below 25 points, limiting the possibility of obtaining high yields (Ganush, 2016). All this gives reason to speak about the incorrect positioning of the branches of the agri-food sector of Belarus as factors of economic growth, as well as the presence of objective prerequisites for the search for new "locomotives" of the economy.

Following NSDS-30, the country has embarked on creating production facilities of V-VI technological orders. In such an economy, growth is driven by the high-tech sector (Pogorzelskaya, 2017; Chubrik, 2006). In this regard, we can talk about some contradictions: on the one hand, the state promotes the status of the AIC as a "locomotive" of the Belarusian economy through the media, the system of agricultural education, state programs, and on the other hand, aims at a technological breakthrough. Very authoritative and deservedly respected scientists in agricultural economics proclaim the status of Belarus as an agro-industrial country (Gusakov, Shpak, and others.). The stereotype of Belarus as an agricultural country is broadcast through the education system and the media. However, this is neither theoretically nor practically in agreement with the prospects of the V – VI technological orders. It's time to admit that the economic growth of Belarus no longer depends on the agri-food sector. We need to look for new points of development, study foreign experiences that can be implemented in Belarusian conditions (Osieczko and Stec, 2019; Sus and Sylwestrzak, 2021). For example, only one of the high-tech industries - information and communications - has increased over the past decade from 2.3% to 5.4% in the structure of GDP. As you can see, the national economic complex includes such types of economic activities that are dynamically developing, based on domestic resources, and are a prerequisite for V – VI technological orders.

The national economy of any country is formed as a result of the purposeful activities of people. Therefore, together with objective factors, subjective factors also influence the economy. In addition to this, the economy is controlled by past experiences. It seems that the stake on the AIC in the socio-economic development of Belarus is a kind of stereotype, a national attribute that has been formed over the years. This stereotype influences the formation of the state's strategy. Stereotypes are static, provide a sense of orientation, and are difficult to change (Gorbaniuk and Razmus, 2010). Nevertheless, in choosing an industry specialization, one should be guided by the criteria of economic expediency and not by stereotypes.

The Republic of Belarus is a country with an economy in transition. Successful transformation of the economy requires the restructuring of old institutions, active government support for high-tech industries, the search for new factors of economic growth, which, in turn, is the foundation for sustainable development of the socio-financial system (Mazhar and Rehman, 2019; Sytnik, Britchenko and Stepochkin,

2017). Following the classification by the level of development, Belarus belongs to the countries with an average level of development. International experience and numerous studies show that for such countries, the factors of economic growth are structural reforms that contribute to the active development of market institutions (Aganbegyan, 2019; Dominiak, 2020; Xin, 2006). Even though the adopted development model of Belarus is defined as a socially-oriented market economy, the agri-food sector retains the forms and methods of management characteristic of a planned economy.

4. Conclusion

As a result of the study, we will draw the following conclusions. Agri-food policy is part of the economic policy of Belarus. The regulation of the agri-food sector is carried out by the Council of Ministers and the President of the country by developing and implementing state programs that have the force of law.

Even though the AIC is an object of state administration, its composition is not normatively defined, and in the educational, methodological literature, scientific works, it is interpreted ambiguously. The state policy in the field of the AIC covers two independent types of economic activity - agriculture and food production. Indicators for the AIC as a whole (as for a structural unit of the economy) are not formed by the state.

It is not possible to assess the results of the work of the AIC (as a multi-sectoral and inter-sectoral system) because the accounting of the national product is carried out based on the type of economic activity and not based on the agricultural origin of the development and its participation in the provision of food. As a subject of public administration, the National Statistical Committee does not collect and process statistical information on the AIC. The agro-industrial complex as an economic complex is neither an object of planning nor an object of accounting. The methodological basis for assessing the place of the AIC in the economy's structure has not been created. Therefore, the AIC is not a structural formation in the economy of Belarus.

The economy of Belarus is a set of economic activity types. Therefore, the isolation of the agro-industrial complex as a subject of the economy and an object of state administration was not revealed in the course of the study, and the state was not reasoned. The analysis did not show a high level of linkages between agriculture and the food industry. The branches of the agri-food sphere - agriculture and food sector - do not significantly impact the economic growth of Belarus. Therefore there is no reason to consider them as the "locomotive" of the national economy.

Analysis of the dynamics and structure of foreign trade turnover, profitability, and the share of unprofitable enterprises shows the need to improve economic policy in the agri-food sector. The study does not question the need for state regulation in the agri-

food sector, and the conclusions drawn characterize the agro-industrial complex of Belarus exclusively. They cannot be extended to the agro-industrial complex of other countries or their integration associations.

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