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ASSESSMENT OF COMPETITIVE CAPACITY OF AGRARIAN SECTOR BRANCHES

The paper identifies the main factors influencing the investment climate in the agricultural sector of the region. The interrelation between the concepts of competitive capacity and investment attractiveness of the industry as interrelated factors affecting the effectiveness of investment development of regional agriculture are studied. By calculating the integral rank using the main criteria and the system of restrictive criteria on the basis of expert assessments, the ranging of agro-industrial complex of Cherkasy region in terms of investment attractiveness is carried out. By means of the coordinate matrix method the competitive capacity of agricultural production has been assessed.

Keywords: assessment of investment attractiveness; investment activity; agricultural production; competitive capacity; agricultural sector.
JEL classification: E62; G32.

Оксана В. Митяй

ОЦІНЮВАННЯ КОНКУРЕНТОСПРОМОЖНОСТІ ГАЛУЗЕЙ АГРАРНОГО СЕКТОРУ РЕГІОНУ

У статті визначено головні фактори, що впливають на інвестиційний клімат в аграрному секторі регіону. Вивчено взаємозв'язок між концептами конкурентоспроможності і інвестиційною привабливістю галузі як взаємозв'язаними чинниками, що впливають на ефективність інвестиційного розвитку сільськогосподарського сектору в регіоні. Здійснено ранжування галузей АПК Черкаської області за рівнем інвестиційної привабливості шляхом розрахунку інтегрального рангу по головному та системі обмежуючих критеріїв на підставі експертних оцінок. За допомогою координатного матричного методу оцінено конкурентоспроможність сільськогосподарського виробництва.

Ключові слова: оцінювання інвестиційної привабливості; інвестиційна діяльність; сільськогосподарське виробництво; конкурентоспроможність; аграрний сектор економіки.
Рис. 1. Табл. 4. Літ. 11.

Оксана В. Митяй

ОЦЕНКА КОНКУРЕНТОСПОСОБНОСТИ ОТРАСЛЕЙ АГРАРНОГО СЕКТОРА РЕГИОНА

В статье определены главные факторы, влияющие на инвестиционный климат в аграрном секторе региона. Изучена взаимосвязь между концептами конкурентоспособности и инвестиционной привлекательностью отрасли как взаимосвязанных факторов, которые влияют на эффективность инвестиционного развития сельскохозяйственного сектора в регионе. Осуществлена ранжировка отраслей АПК Черкасской области по уровню инвестиционной привлекательности путем расчета интегрального ранга по главному и системе ограничивающих критериев на основе экспертных оценок. С помощью координатного матричного метода оценена конкурентоспособность сельскохозяйственного производства.

Ключевые слова: оценка инвестиционной привлекательности; инвестиционная деятельность; сельскохозяйственное производство; конкурентоспособность; аграрный сектор экономики.

Problem setting. Investing in agriculture is a means of ensuring food security and the guarantee of agriculture production development. The revival of agriculture large-

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ly depends on the volume and effectiveness of targeted investments, which requires significant funds for restructuring, improving competitive capacity of agricultural products etc. Development and growth of investment activity in regional agriculture is impossible without improving the competitive capacity of enterprises within regional agro-industrial complex.

Recent research and publications analysis. Competitiveness is one of key indicators of an enterprise as an economic (production) system, which determines the prospects for its further development, the ability to achieve strategic objectives (Malik and Nuzhna, 2007). One of strategic objectives of an agricultural enterprise is to maintain or improve its competitiveness. The issues of economic efficiency and competitiveness of agricultural enterprises are reflected in the works of V. Andriichuk (2002), M. Demyanenko et al. (2012), I. Gryshova et al. (2015), N. Kravchuk and V. Yakimets (2015), O. Kyrychenko et al. (2000), M. Malik and O. Nuzhna (2007), M. Pistun (2008), T. Zinchuk (2009) and others.

The aim of the article is to test the methodological approaches to assessing the competitiveness of agricultural production and investment attractiveness of the agricultural sector branches in the Cherkasy region.

Key research findings. A set of factors that shape investment demand and supply, affects the growth and dynamics of investments in the country and in some regions. We can mention the following factors: technical and economic, organizational and managerial, social and economic, social and psychological, legal and other. All these factors may have a different orientation vector and the degree of influence on the dynamics of investment growth (Andriichuk, 2002).

The formation of a competitive capacity of regional agricultural economy needs to mobilize all available resources for the overall territorial and production advantage.

Assessment of investment attractiveness of a certain territory is very important for a balanced development of a region. This assessment is defined by a set of factors that stimulate capital inflows to the region. Investment activity in the region should be seen as an integrated intensity of inflows of domestic and foreign capital (Kravchuk and Yakimets, 2015). Investment climate should be considered as investment conditions that affect investor preferences in choosing a particular investment object. Investment climate in the region form the following factors: the level of development of prior branch industries, state and dynamics of the investment market, state support activities and stimulation of investment activity in agriculture, ensuring the attractiveness of investment objects, the stable state of the financial and credit system, financial intermediaries activity, stability of national currency and foreign exchange regulation.

An important aspect of a favorable investment climate is to determine the investment potential of the region, which is characterized by the ability of its economy to perform investment activity in all areas. It is aimed to produce high-quality products, qualified works and services that meet the needs of economic entities and population and the ability to provide reproduction and consumption.

The key factors of investment climate creation in agricultural economics of the region are shown in Figure 1.

We should note that the analysis and assessment of investment attractiveness of industrial components of agrarian production of the region are paramount.
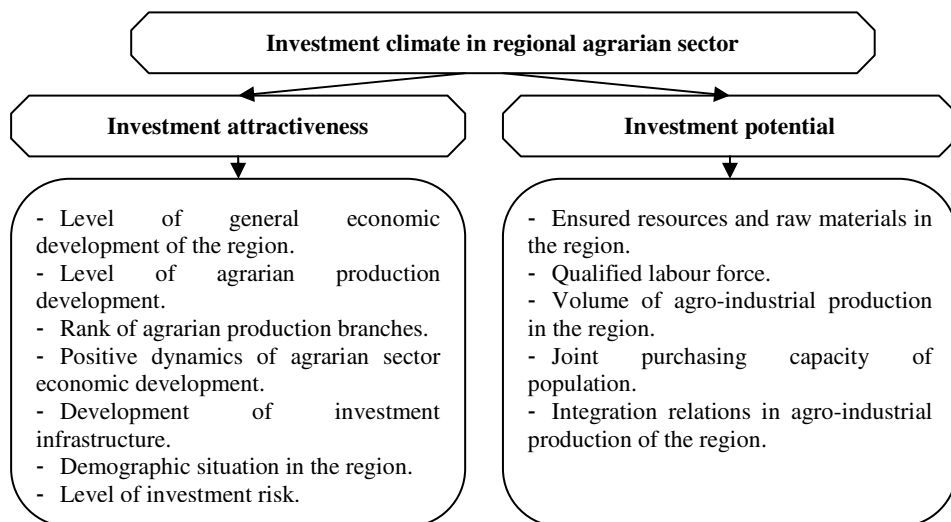
Figure 1. **Regional factors of investment climate creation in the agrarian sector,** *proposed by the author on the basis of* (Zinchuk, 2009)

According to the results of our studies, most branches of agricultural production in the Cherkasy region have a relatively positive trend of growth in terms of profitability indices. This shows the economic efficiency in this sector of the regional economy that greatly improves the investment attractiveness.

During the study we selected 7 branches of agro-industrial production in the region, where, in comparison with the overall regional state of agriculture, we can follow the positive trends in development (Table 1).

Table 1. **Agro-industrial production in the Cherkasy region in terms of economic status and potential investment attractiveness, 2014,**
calculated by the author on the basis of (The State Statistics Service of Ukraine, The official website of the Cherkasy Regional Council, 2015)

Branches / Indicators	Production of grain crops	Production of meat	Production of milk	Production of sunflower	Production of sugar beet	Production of poultry meat	Production of vegetables
Specific gravity of production in Ukraine, %	4.9	9.9	4.0	1.9	8.0	13.0	8.5
Average index of products volume growth in 5 years	1.1	1.01	0.94	2.1	0.9	1.07	1.05
Average index of volume growth of production realization in 5 years	1.33	0.98	1.03	2.02	0.84	1.1	0.91
Profitability of production, %	40	2.3	14.7	44.8	23.2	38.4	18.9
Average index of production volume per person in 5 years	1.2	1.02	1.03	1.35	1.1	1.05	0.99
Average index of production volume growth in agriculture enterprises in 5 years	1.08	1.56	0.93	1.35	1.06	1.44	1.15
Average rate of growth of productivity of branch industry	1.08	1.1	1.05	1.09	1.07	1.12	1.02

Within the framework of the research we developed a ranking system of agro-industrial complex branches in terms of investment attractiveness. The following objectives were carried out:

- calculation of the integral rank on the main criterion;
- ranking agro-industrial branches by the main criterion;
- calculation of the integral ranking by limiting criteria;
- ranking of agro-industrial branches by restrictive criteria;
- calculation of the integral rank by the main and defined rank of the restrictive criteria;
- final ranking and defining priority branches in the regional agro-industrial complex (Tables 2—3).

Table 2. **Ranking of agro-industrial branches by their main and restrictive criteria,** *calculated by the author on the basis of* (The State Statistics Service of Ukraine. The official site of the Ministry of Agrarian Policy, 2015)

Branches of production	Main criterion of production profitability, %	Restrictive criteria					
		Specific gravity of production in Ukraine, %	Average index of production volume growth in 5 years	Average index of volume growth of production realization in 5 years	Average index of production volume per person in 5 years	Average index of production volume growth in agriculture enterprises in 5 years	Average rate of growth of productivity of branch industry
Production of grain crops	2	5	2	2	2	5	4
Production of meat	7	2	5	5	6	1	2
Production of milk	6	6	6	4	5	7	6
Production of sunflower	1	7	1	1	1	3	3
Production of sugar beet	4	4	7	7	3	6	5
Production of poultry meat	3	1	3	3	4	2	1
Production of vegetables	5	3	4	6	7	4	7
Specific gravity of criteria, %	50	10	10	8	6	7	9

Thus, according to the integral rank the most effective in terms of investment attractiveness branches of the agricultural sector in the Cherkasy region is the production of oilseeds (coefficient is 0.75), production of poultry (1) and grain production (1.25). Meat and milk production is less attractive in terms of investment resources use (2.75 and 3.25 accordingly).

Development and growth of investment activity in agriculture of the region is impossible without improving the competitive capacity of agrarian businesses. We argue that such categories as investment attractiveness and enterprises' competitive capacity are interrelated notions.

Competitiveness of agricultural enterprises provides the opportunity for its effective functioning under market economy. This means that their production activities must fully meet the criteria of investors, consumer demand to ensure the maximum return on capital and means of production and to ensure the balanced development of administrative components of the region.

Table 3. **Integral criteria and ranking of agro-industry branches,**
calculated by the author on the basis of (The State Statistics Service of Ukraine.
The official site of the Ministry of Agrarian Policy, 2015)

Branches	Calculation of integral rank by the restrictive criteria	Meaning	Rank	Calculation of the integral rank by the main and defined rank of restrictive criteria	Meaning	Rank
Production of grain crops	(5 x 0.1 + 2 x 0.1 + 2 x 0.08 + 2 x 0.06 + 5 x 0.07 + 4 x 0.09) / 6	0.282	3	(2 x 0.5 + 3 x 0.5) / 2	1.25	3
Production of meat	(2 x 0.1 + 5 x 0.1 + 5 x 0.08 + 6 x 0.06 + 1 x 0.07 + 2 x 0.09) / 6	0.285	4	(7 x 0.5 + 4 x 0.5) / 2	2.75	5
Production of milk	(6 x 0.1 + 6 x 0.1 + 4 x 0.08 + 5 x 0.06 + 7 x 0.07 + 6 x 0.09) / 6	0.475	7	(6 x 0.5 + 7 x 0.5) / 2	3.25	6
Production of sunflower	(7 x 0.1 + 1 x 0.1 + 1 x 0.08 + 1 x 0.06 + 3 x 0.07 + 3 x 0.09) / 6	0.237	2	(1 x 0.5 + 2 x 0.5) / 2	0.75	1
Production of sugar beet	(4 x 0.1 + 7 x 0.1 + 7 x 0.08 + 3 x 0.06 + 6 x 0.07 + 5 x 0.09) / 6	0.452	6	(4 x 0.5 + 6 x 0.5) / 2	2.5	4
Production of poultry meat	(1 x 0.1 + 3 x 0.1 + 3 x 0.08 + 4 x 0.06 + 2 x 0.07 + 1 x 0.09) / 6	0.185	1	(3 x 0.5 + 1 x 0.5) / 2	1	2
Production of vegetables	(3 x 0.1 + 4 x 0.1 + 6 x 0.08 + 7 x 0.06 + 4 x 0.07 + 7 x 0.09) / 6	0.313	5	(5 x 0.5 + 5 x 0.5) / 2	2.5	4

Competitive capacity of a particular entity is a variable value, which eventually decreases. The initial level of competitiveness should be higher, the decline in competitiveness and, consequently, in the volume of sales will be determined by the pace of its moral depreciation, scientific and technological progress in a particular industry.

Of practical interest is the relationship between such notions as competitive capacity and investment attractiveness of the industry, enterprise and the region, on the one hand and administrative components of agricultural market on the other as interrelated and interdependent factors of influence on the effectiveness of investment development of regional agriculture (Demyanenko et al., 2012).

The most distinct indicators that characterize the production competitive capacity are production investments (production costs), specific gravity in total regional production, purchasing power of consumers, product profitability level, the rate of profit. Additional indicators of competitive capacity are profit per 1 ha of crop, per 1 ha of agricultural land, per one head of cattle.

Using the method of coordinate matrix we assessed the competitive capacity of agricultural production in different districts of the Cherkasy region (Table 4).

The algorithm of this method implementation includes the following stages. The first stage defines the set of indicators that characterize the status and the level of agri-

Table 4. **The competitive capacity of raw material base of agricultural production in different districts of the Cherkasy region, 2014,** *calculated by the author on the basis of* (The State Statistics Service of Ukraine, Statistical Yearbook of Cherkasy region, 2015)

Districts	Agricultural products, mln UAH	Number of active agricultural enterprises	Specific gravity in general volume of agricultural production, %	Level of agricultural products profitability, %	Agricultural products per 100 ha of agricultural lands / 100 ths UAH	Production of grain crops and grain legumes, ths tons	Production of sunflower, ths tons	Production of vegetables, ths tons	Production of sugar beet, ths tons	Production of meat, ths tons	Production of milk, ths tons	Productivity of grain crops, hundred weight/ha	Productivity of cattle, kg
Horodyshche	396.5	60	4.45	17.2	73.02	138.7	11.9	23.3	27.7	2	3	43.6	4977
Drabiv	528.1	138	5.93	23.4	57.78	181.5	10.4	29.9	**268.1**	4	**32**	37.8	6392
Zhashkiv	144.2	39	1.62	13.3	37.65	83.0	5.7	22.0	50.0	0	4	39.4	4652
Zvenyhorodka	400.0	85	4.49	144.6	67.68	139.2	9.5	42.1	17.1	6	7	41.7	5107
Zolotonosha	32.8	18	0.37	25.6	26.89	13.8	0.0	9.4	–	1	3	27.3	4318
Kamyanka	910.9	67	**10.23**	-0.1	234.16	73.2	4.3	60.1	0.4	18	3	36.9	3645
Kaniv	508.0	103	5.70	106.9	83.28	94.6	3.9	34.7	267.2	1	6	36.1	5062
Katerynopil	**1284.3**	37	14.42	2.8	**1493.37**	6.3	0.0	14.3	–	**140**	0	20.7	–
Korsyn-Shevchenkove	281.5	43	3.16	39.2	59.01	98.1	10.7	11.7	128.8	3	8	38.4	5132
Lysianka	452.7	97	5.08	-0.5	88.07	174.3	6.6	11.5	46.4	9	30	50.3	**8404**
Mankivka	24.1	19	0.27	9.2	13.31	17.2	–	7.2	–	0	0	20.6	7762
Monastyryshche	425.5	108	4.78	23.9	64.57	**208.1**	10.9	28.8	46.2	6	9	62.0	3776
Smila	119.0	72	1.34	-17.9	68.00	7.5	0.0	**67.2**	–	1	10	23.2	4264
Talne	314.1	39	3.53	77.5	100.35	71.9	1.0	13.6	0.0	0	8	43.1	4434
Uman	326.4	90	3.67	60.4	53.95	175.1	9.8	18.4	47.0	2	9	55.5	6036
Khrystynivka	140.4	48	1.58	3.1	40.34	57.0	6.1	17.0	38.2	1	10	41.0	4629
Cherkasy	454.8	128	5.11	16.5	61.29	206.1	**15.3**	13.2	16.0	8	5	44.5	4442
Chyhyryn	5.2	9	0.06	**170.3**	8.00	8.0	–	1.4	–	0	0	22.3	692
Chornobay	358.6	49	4.03	36.2	88.76	135.8	5.3	9.9	72.4	4	9	**60.9**	5605
Shpola	354.0	**143**	3.98	19.6	49.51	167.4	12.7	10.3	121.8	3	10	40.3	4787

cultural production competitiveness as raw materials of regional agricultural production. The second stage shows the maximum indicators in each line. Then all the indicators are divided into maximum and the matrix of coordinates is made first. At the third stage all the indicators are reconciled into square and are summed by column.

The obtained sum characterizes the generalized index of agricultural production competitiveness.

Based on the results, we note that the highest index of competitiveness, as the basis for investment attractiveness by the raw components of agricultural sector in the Cherkasy region belongs to Drabiv (5.84), Katerynopil (5.22), Lysianka (4.35), Cherkasy (4.05), Monastyryshche (3.96) regions and the lowest is in Chyhyryn (1.15), Mankivka (1.01) and Zolotonosha (0.54).

We believe that the organizational and economic mechanism of competitive capacity increase as the basis for investment attractiveness formation of agricultural enterprises should be seen as a system of organizational, technological, economic and environmental instruments and management methods. These methods provide a set of high consumer properties of agricultural products and its processing products, the demand for it at the food market at optimum expenses on its production and the sufficient level of prices that ensures efficient industries and enterprises development and promotes the growth of investment attractiveness (Gryshova et al., 2015).

Conclusions. One of the important functions in strategic management of investment activities at regional agro-industrial level is to develop investment strategies to stabilize and further increase agricultural production volume, employment and welfare. Decision-making on investing requires a profound and systemic assessment of investment attractiveness of agricultural branches in the region.

According to the results of our study, agricultural branch is the most investment-attractive in the Cherkasy region (production of oilseeds, poultry, grains). To increase the investment attractiveness of other branches is possible through competive capacity and demand increase. Thus, such categories as investment attractiveness and competitive capacity of enterprises and products are interrelated notions.

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