

STATE TOOLS FOR THE DEVELOPMENT OF ENTREPRENEURIAL ACTIVITY IN THE AGRARIAN SPHERE

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their effectiveness in agricultural policy of the world.

LITERATURE REVIEW

The tools of agrarian regulation have long been the focus of research. Dewbre and Short (2002) identify the impact of policy interventions on trade performance and the competitiveness of agrarians. Greenville et al. (2019), Punthakey (2020) devote labor to drivers in agri-food global value chains. Meuwissen, Assefa, Van Asseldonk (2013), Matthews (2018) see the basis of agrarian policy to overcome agrarian income instability and in their writings offer tools to effectively address this problem. GRUÈRE, BROOKS (2021) examine and categorize policy responses to the COVID-19 pandemic, demonstrating differences between developed OECD countries, which primarily applied measures related to financial support, and developing countries, which focused on trade policy, information provision, or food aid. Government support in various forms affects the size of the agrarian workforce (OLPER et al., 2014; PETRICK, ZIER, 2012), farm investment (O'TOOLE, HENNESSY, 2015), agrarian export performance, agrarian net income, and national economic (ANDERSON, VALENZUELA, 2021).

The instrument of state support for producers in the agricultural sector (PSE) and its impact on the sustainable development of the agricultural sector, including its productivity and environmental performance, is explored in the works of Deboe (2020), Deboe et al. (2020), Lankoski, Thiem (2020). Bardhan (2011) proves that programs to provide farmers with seeds and fertilizers have significantly increased the value added of farms; Zivenge, Jesythomas (2014) note that such support increases the scale of agricultural production; Yi, Sun, Zhou

INTRODUCTION

Regulation of the agrarian sector plays an important role in the formation of food security, as well as in ensuring the income and livelihoods of the population employed in agriculture. At the same time, entrepreneurial activity in the agricultural sector is characterized by an uncertain environment and is accompanied by risks. Macroeconomic factors (for example, inflation, economic growth, the national currency exchange rate, which determines the price of production resources in agriculture) and climatic conditions that determine the productivity of crops affect the efficiency of business activities in the agrarian sector. During the global crisis caused by COVID-19, the problems of the agrarian sector were further intensified by a number of factors - from the restriction of migration processes of labor force employed in the sector, to the reduction of demand for agrarian products due to the closure of catering establishments. As one of the riskiest spheres of economic activity, the agrarian sector needs permanent government support, and the goals of agrarian policy should include not only national interests, but also focus on the creation of favorable conditions for business development in the agrarian sector. In this regard, the relevance of the study of directions and instruments of state support for the development of entrepreneurial activity in the agricultural sphere, which have proven

(2015) establish that the grain subsidy program increased the area of grain planted by farmers with limited liquidity; Munćan, Božić (2013) note that producer support measures increase both the production and quality of agricultural products. However, Lopez, C.A., Salazar, L., De Salvo, C.P. (2017) argue that resource support for agricultural production does not affect its productivity or resource efficiency.

Instruments of market regulation are recognized to influence the level of both market and quota prices of agricultural products (LU, 2002). Henderson, Lankoski (2019; 2020) consider the environmental impacts (greenhouse gas emissions, water quality, biodiversity) of market price support (MPS). Assessing the instruments of increased liberalization of the market for agricultural products (reduced tariffs on imports), Fraser (2006) points to the loss of the local fruit and vegetable processing industry and reduced production.

Tools to attract investment in the agricultural sector are evaluated positively in science. Punthakey (2020) emphasizes the role in attracting foreign direct investment in the agribusiness sector. Heiseyand, Fuglie (2018) determine that public investment in agrarian research and development has been growing very slowly recently, which affects the quality of agrarian products and the productivity of agrarian companies. Kristkova, Van Dijkand Van Meijl (2017) prove the impact of investment in R&D on agrarian productivity but emphasize that public investment in R&D cannot stimulate agrarian production to the expected level. HANJRA, & CULAS (2011) note that the state should encourage private sector investment to improve infrastructure and access to markets for agricultural products, helping to remove barriers to the effective participation of public and private investors.

Instruments of direct state subsidies in the agricultural sector is the subject of research of the following scholars. Ayouba et al. (2017) note that state subsidies have an ambiguous effect on farmers: they can both stimulate innovation and more efficient technologies and demotivate farmers to use their resources efficiently. Latruffe and Desjeux (2016) also highlight the mixed results of modeling the impact of subsidies on the efficiency and productivity of the agrarian sector. Minviel and Latruffe (2017) present empirical results on the impact of government subsidies on the technical efficiency of farmers and find that the direction of this impact (negative, positive, or insignificant) is sensitive to the way the modeling. Liyun and Guanqiao (2017) note that the policy of direct subsidies loses efficiency over time, as it is found that the distribution of resources and low productivity are unjustified. Liyun and Guanqiao (2017) note that the policy of direct subsidies loses efficiency over time, as it is found that the distribution of resources and low productivity are unjustified. The explanation for this fact may lie in the dependence of the effectiveness of subsidies not only on their volume, but also on the professional competence of farmers and their incentives to use them effectively to increase production. Instruments of support services in the agricultural sector are assessed ambiguously. Onumah et al. (2014) recommend improving smallholder farmers' access to this support to increase production. Ragasa, Mazunda (2018) establish that the provision of advisory services contributes to greater productivity of agricultural production, but a prerequisite is the usefulness and suitability of such advice. Consequently, training, and advisory support services from the state should be effective if they are of quality. In addition, the knowledge obtained by farmers, contribute to increasing their innovative activity, respectively - will ensure the growth of productivity and competitive position in the market.

Thus, today continues the scientific debate on the effective formation of a system of instruments of state support for the development of entrepreneurial activity in the agrarian sphere.

AIMS

The purpose of the work is to establish the results in them of the state tools for the development of entrepreneurial activity in the agricultural sector of Ukraine (based on the experience of countriesEU and OECD).

The hypothesis of the study is the effectiveness of agricultural policy instruments aimed at the development of innovation and infrastructure sector.

To implement the aim and hypotheses, it is necessary to perform the following tasks:

evaluate the relationship between the total value of agrarian production and the total support provided to the agrarian sector, using the example of EU and OECD panel data;

to establish the influence of the types and structural volumes of the total support on the total value of the agrarian sector production, to identify the most effective directions of support on the example of the EU and OECD panel data;

to determine the influence of the most effective types of support on the total value of agrarian production by the example of EU and OECD panel data;

substantiate the directions of transformation of the system of instruments of regulatory mechanism for development of entrepreneurial activity in the agrarian sector of Ukraine by comparative analysis of the most effective types of support of the agrarian sector of the European Union and OECD and Ukraine.

METHODS

Panel data for the empirical analysis are based on uniform OECD database data (2021, 2021b) for the period from 1986 to 2020.

Assessment of the relationship between the total value of agrarian production and the total support provided to the agrarian sector is based on the construction of a regression equation between the independent variable TSE (Total support - total support provided to the agrarian sector (OECD, 2021b)) and the resulting indicator TVP (Total value of production (at farm gate) (OECD, 2021a)):

$$TVP = b_0 + b_1 * TSE.$$

Regression equation estimation parameters are measured by the indices of multiple determination R^2 , p -criterion and F -criterion.

Total support (TSE) includes: transfers to individual producers (Producer support PSE (OECD, 2021b)), budget support to consumers (Consumer support CSE (OECD, 2021b)) government spending on general services for the agrarian sector (General services support GSSE (OECD, 2021b)). To detail the impact of the types and structural amounts of general support on the total value of agrarian sector output, a regression equation is constructed:

$$TVP = b_0 + b_1 * PSE + b_2 * CSE + b_3 * GSSE.$$

Regression equation estimation parameters are measured by the indices of multiple determination R^2 , p -criterion and F -criterion.

To identify the most productive areas of support to the agrarian sector the values of the regression equation parameters b and pair correlation coefficients of the resulting indicator TVP and factors PSE, CSE, GSSE are estimated:

$$r_{xy} = \frac{\overline{x \cdot y} - \bar{x} \cdot \bar{y}}{s(x) \cdot s(y)}$$

Data for the simulation are shown in Table 1.

Table 1. Input data for modeling the impact of general support on the value of agrarian production, mln USD

Year	TVP	TSE	PSE	CSE	GSSE	TVP	TSE	PSE	CSE	GSSE
	OECD - Total					European Union				
1986	54059 7,88	94457,32	216529,00	-140016,00	21631,0 0	208819,48	23074,25	84185,00	-61250,00	7375,40
1987	60023 0,87	102553,85	242277,00	-167400,00	26543,1 0	239438,19	30939,92	104699,00	-77716,00	10222,90
1988	64149 4,98	106167,35	231832,00	-157715,00	28531,3 0	252415,53	32456,97	97271,00	-69258,00	9755,80
1989	66460 0,29	105270,11	211079,00	-138376,00	30554,7 0	254934,55	33254,09	75441,00	-51102,00	10759,90
1990	73004 4,94	122562,43	240927,00	-149894,00	37771,7 0	293974,72	49360,78	102389,00	-64208,00	16849,60
1991	72254 2,49	123041,15	262971,00	-177164,00	40445,4 0	290615,52	48541,54	119647,00	-76457,00	16015,90
1992	74786 9,58	129965,73	261156,00	-173429,00	39737,9 0	294300,32	52412,15	111705,00	-65004,00	14509,60
1993	71244 2,04	131873,14	255204,00	-179489,00	38709,1 0	249767,14	47353,30	102670,00	-56699,00	8605,20
1994	74943 2,06	13642,53	264814,00	-175865,00	37343,1 0	256574,55	52596,05	103650,00	-54963,00	6954,10
1995	79769 1,22	156237,77	257609,00	-177793,00	48183,7 0	303680,21	66168,75	118591,00	-58694,00	10095,60
1996	81216 5,82	155469,93	245475,00	-153983,00	43486,6 0	308357,65	67847,34	112169,00	-50502,00	10891,30
1997	75491 5,94	145965,70	217588,00	-130644,00	41468,4 0	274788,14	61711,79	96225,00	-42339,00	10920,60
1998	71199 3,39	150877,62	237709,00	-145181,00	41584,9 0	265128,94	58288,98	103112,00	-50394,00	9869,10
1999	69413 9,45	155636,46	259024,00	-166958,00	38205,4 0	250304,48	55499,82	104791,00	-55427,00	9351,10
2000	67677 4,88	153347,47	232042,00	-131516,00	37009,5 0	222747,91	51906,87	79864,00	-33425,00	7769,40
2001	66872 3,64	153159,88	205056,00	-102694,00	36430,8 0	223857,14	54445,12	75138,00	-28165,00	8466,70
2002	66838 8,74	151932,44	213489,00	-116878,00	36223,7 0	228673,92	57464,65	84341,00	-37409,00	8828,30
2003	76225 2,81	170283,96	233545,00	-124285,00	38986,3 0	274844,85	68894,42	102595,00	-42208,00	9785,70
2004	85949 8,01	190117,07	264271,00	-129518,00	40746,1 0	345960,65	87032,21	126451,00	-51092,00	14040,50
2005	86781 1,15	197689,56	256882,00	-118463,00	42698,4 0	337403,12	88001,65	116322,00	-43172,00	14860,30
2006	89519 0,85	198986,45	245318,00	-110381,00	42655,9 0	350445,09	93552,68	116905,00	-39823,00	14529,60
2007	10752 67,44	205181,71	242514,00	-102642,00	44060,2 0	446748,01	100841,43	118304,00	-36501,00	16155,10
2008	11649 39,09	232607,77	250018,00	-86791,00	53398,1 0	503409,39	117361,72	123422,00	-27359,00	20707,30
2009	10316 61,74	219770,87	242968,00	-85189,00	46471,4 0	420416,76	106651,91	115326,00	-25001,00	15946,70
2010	11604 37,67	225703,63	249080,00	-87707,00	46333,8 0	432116,5	103239,56	100277,00	-12462,00	15538,30
2011	13059 01,14	247538,05	258921,00	-83583,00	48825,3 0	506983,32	111932,02	106629,00	-11628,00	17207,90
2012	13184 12,66	239847,69	266601,00	-92376,00	47258,7 0	483526,01	10569,16	108607,00	-19366,00	16802,60
2013	13259 70,33	242961,92	248167,00	-68582,00	50486,1 0	513187,43	108563,87	118002,00	-25181,00	16373,70
2014	13185 64,88	231249,12	238422,00	-64610,00	44524,7 0	508678,55	99615,05	102422,00	-16878,00	14763,90
2015	11638 24,05	212865,85	218525,00	-60028,00	4111,70	418534,8	88288,92	92643,00	-16478,00	12877,00
2016	11422 28,09	217415,73	226660,00	-70666,00	42840,7 0	406109,39	91469,23	95037,00	-15013,00	11802,70
2017	11986 66,89	216660,70	224701,00	-69633,00	43961,4 0	442065,47	93953,05	98883,00	-15308,00	11651,40
2018	12157 18,65	230120,72	240063,00	-76850,00	44360,4 0	466823,34	100671,45	108994,00	-20344,00	12689,60
2019	11489 55,75	231631,54	242507,00	-77707,00	44264,5 0	452696,86	97236,69	104698,00	-18411,00	12002,40
2020	11630 39,62	243101,42	237984,00	-62327,00	44473,7 0	452748,03	100848,84	104538,00	-14668,00	12416,20

Source: based on data (OECD, 2021a, 2021b).

After identifying the most effective areas of support for the agrarian sector to detail the system of instruments of regulatory mechanism for the development of entrepreneurial activity in agrarian-built regression equation:

$$TVP = b_0 + \sum b_i \cdot x_i$$

Where x_i - volume of the most effective areas of support to the agrarian sector by type; i - the number of types of support in the most productive areas.

Regression equation estimation parameters are measured by the indices of multiple determination R^2 , p -criterion and F -criterion.

To identify the most productive areas of support to the agrarian sector the values of regression equation parameters b and pair correlation coefficients of the resulting indicator TVP and factors x_i :

The selected x_i factors are as follows structure of service support includes:

Support of the agrarian knowledge and innovation system (AKIS);

Inspection and control (IC);

Development and maintenance of infrastructure (DI);

Marketing and promotion (MP);

Public stockholding (PS).

Methods of comparative analysis and graphical interpretation of the amounts of the most effective types of support of the agrarian sector of the European Union and the OECD and the corresponding indicators of Ukraine allow to substantiate the directions of transformation of the system of instruments of regulatory mechanism for the development of entrepreneurial activity in the agrarian sector of Ukraine.

RESULTS

Based on EU and OECD panel data for 1986-2020 (Table 1), a regression equation was constructed:

$$TVP=27955,3+3,303424*TSE. \quad (1)$$

According to the results of modeling we can state that the total value of agrarian sector production in the absence of support from the state and EU and OECD countries is 27955300000 USD. The coefficient b_1 indicates that during the growth of the volume of state support by 1 mln USD, the value of agrarian production grows by 3,303424 mln USD.

The regression statistics of equation (1) is shown in Table 2.

Table 2. Regression equation statistics of the relationship between the total value of agrarian production and the total support provided to the agrarian sector

Regression statistics	
Multiple R	0,816343585
Multiple R ²	0,66641685
Adjusted R ²	0,661511215
F(1,68)	135,847226
p	0,0000
Std.Err. of Estimate	198947,59

Source: Search data.

The criteria of statistical significance of the equation are tested and reliable (Table 2). In the investigated situation 66.64% of the total variability of the agrarian sector production value is explained by the change in the factors of general support of the sector.

Based on the EU and OECD panel data for 1986-2020 (Table 1), a regression equation is constructed to describe the impact of the types and structural amounts of general support on the total value of agrarian sector output:

$$TVP=-75277,4143 +4,6268*PSE+4,5431*CSE+10,0329*GSSE. \quad (2)$$

According to the results of modeling (2) we can state that the total value of agrarian production during the growth of \$1 million of state support to producers grows by 4.6268 mln USD, during the growth of consumer support grows by 4.5431 mln USD, during the growth of service support to the agrarian sector grows by 10.0329 mln USD. That is, the most influential on the growth of total value of agrarian production is support for services to agrarian sector.

The criteria of statistical significance of equation (2) are tested and reliable (Table 3). In the situation under study 96.79% of the total variability of the value of agrarian sector production is explained by the types and structural volumes of total support.

Table 3. Regression statistics of the equation of dependence between the total value of production of the agrarian sector and the types and structural amounts of total support to the sector

Regression statistics	
Multiple R	0,983843889
Multiple R ²	0,967948797
Adjusted R ²	0,966491924
F(3,66)	664,401693
p	0
Std.Err. of Estimate	62595,2366

Source: Search data.

Evaluation of pair coefficients of determination confirms that the strongest correlation of the total value of agrarian production is observed with the support of services to the agrarian sector ($r=0.928$), less close, but significant relationship - with the support of producers ($r=0.845$), and the least significant influence has the support of consumers of agrarian products ($r=-0,38$).

Thus, the most influential type of state support for the development of the agrarian sector has been identified - state support for services and infrastructure.

Based on data from OECD (2021a), a regression equation was constructed for the 1986-2020 European Union of OECD countries:

$$TVP=26495,3561+58,821*AKIS+68,1605*IC+9,6531*DI-21,6207*MP+15,3409*PS. (3)$$

From the analysis of equation (3) we can state that the most influential on the total value of agrarian production and effective direction of support services is the support of knowledge and innovation system in the agrarian sector and support for inspection and control.

The statistical significance of equation (3) was checked (Table 4). In the studied situation 98.21% of the total variability of the cost of production of the agrarian sector is explained by the change in the factors of general support services.

Table 4. Regression equation statistics of the relationship between the total value of agrarian sector output and types and structural amounts of total support services of the sector

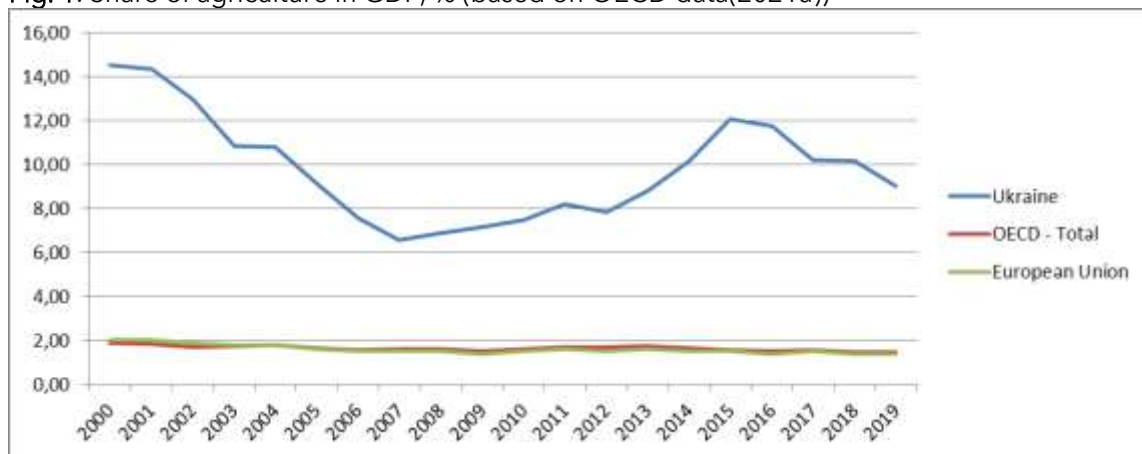
Regression statistics	
Multiple R	0,991009055
Multiple R ²	0,982098947
Adjusted R ²	0,980700428
F(5,64)	702,241747
p	0
Std. Err. of Estimate	47505,1162

Source: Search data.

Estimation of pair coefficients of determination confirmed that the strongest relationship of the total value of agrarian production is observed with support of knowledge and innovation system in the agrarian sector ($r=0.958$) and support of inspection and control ($r=0.966$), less close but significant relationship with development and support of infrastructure ($r=0.877$) and marketing and promotion support ($r=0.806$), and the least significant influence is made by the state corporatization ($r=-0,147$).

Ukraine, the volume of agrarian production in the structure of GDP is on average higher than in the EU and OECD countries (Fig. 1), has certain peculiarities in the application of regulatory policy tools.

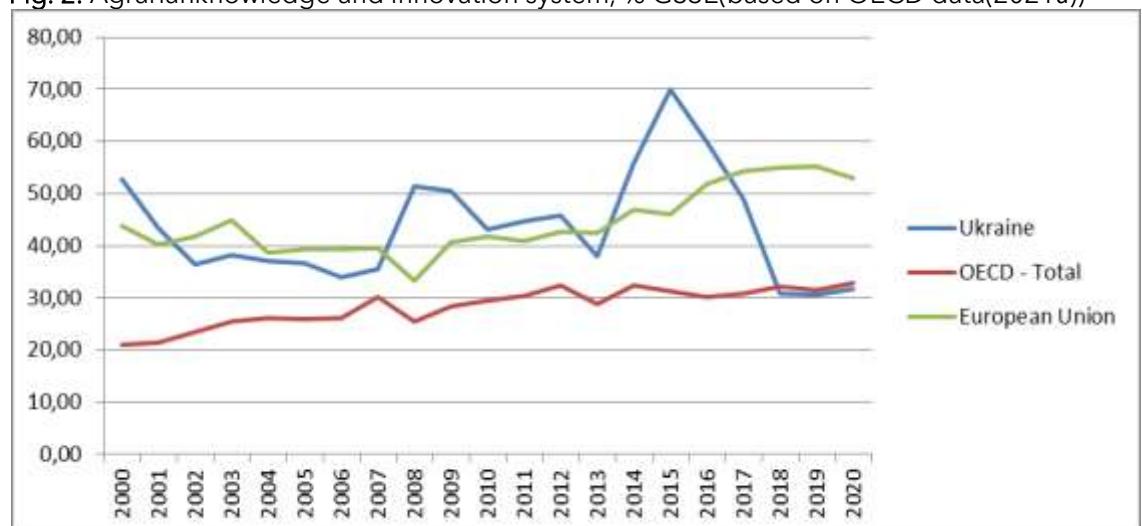
Fig. 1. Share of agriculture in GDP, % (based on OECD data(2021a))



Source: Search data.

Thus, it was stated that since 2015. In Ukraine the specific weight of support of the knowledge and innovation system in the agrarian sphere is sharply reduced and as of 2020 such support becomes the lowest in comparison with the European Union and OECD countries (Fig. 2).

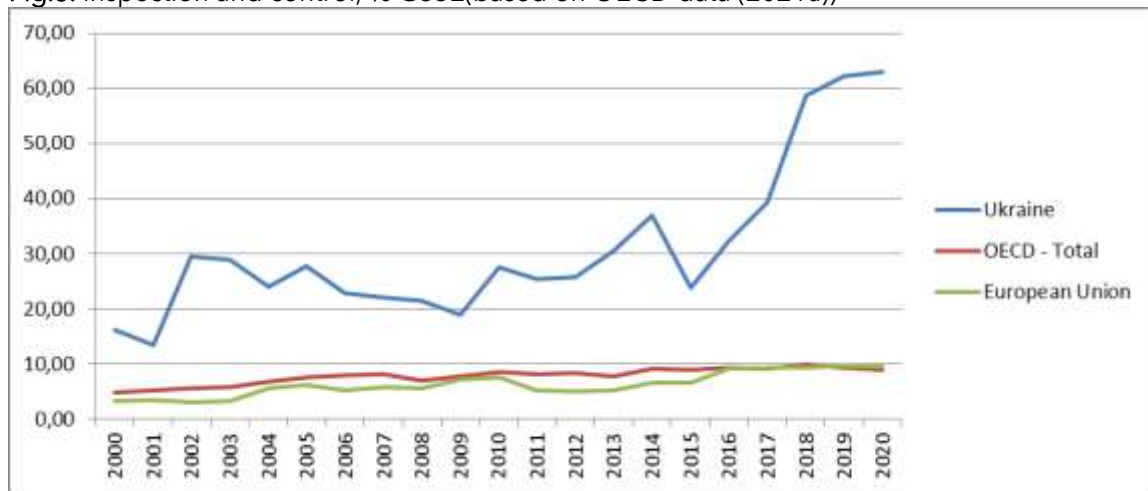
Fig. 2. Agrarian knowledge and innovation system, % GSSE(based on OECD data(2021a))



Source: Search data.

At the same time, during the same period the share of support for inspection and control in the agrarian sector grows rapidly, reaching as of 2020 63% of all support services in the agrarian sector of Ukraine (Fig. 3).

Fig.3. Inspection and control, % GSSE(based on OECD data (2021a))



Source: Search data.

During the period 2006-2020 there is a downward trend in support for domestic infrastructure of the agrarian sector (Fig. 4).

Fig.4. Development and maintenance of infrastructure, % GSSE(based on OECD data (2021a))

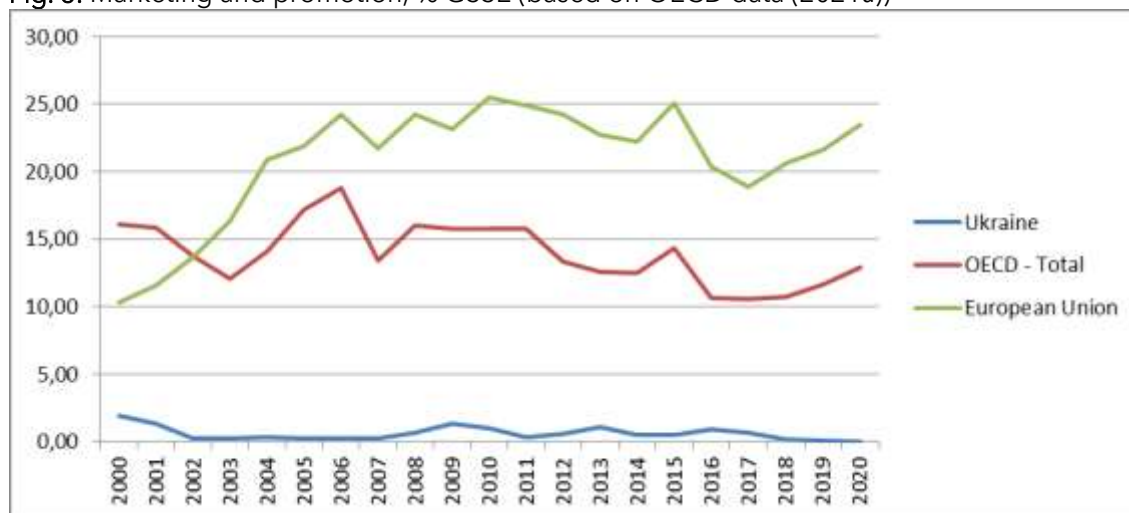


Source: Search data.

At a stable low comparative level during 2000-2020 in Ukraine remains support for marketing and promotion in the agrarian sector (Fig. 5).

So, the instruments for the development of entrepreneurial activity of the agrarian sector in Ukraine requires improvement in terms of transforming the structure of instruments aimed at state support of services in this sector.

Fig. 5. Marketing and promotion, % GSSE (based on OECD data (2021a))



Source: Search data.

DISCUSSION

State support of the agrarian sector affects its productivity, which is consistent with the findings of OLPER et al. (2014), Petrick and Zier (2012), O'toole and Hennessy (2015), Anderson and Valenzuela (2021). However, it is emphasized that the greater effectiveness of forecasting the dependence of the development of the agrarian sector on state support by its type and structure. This is evidenced by the lower level of the multiple determination coefficient in modeling the dependence of the value of agrarian sector output on the total amount of state support (Table 2) compared to the same dependence on the structural volume of the same support by its type (Table 3).

Transfers to producers of agrarian products, which include market price support, budget payments, and the value of lost income, have a significant impact on the value of agrarian sector productivity. While transfers to consumers of agrarian goods, which reduce the price of products, are less effective in their impact. The most effective in terms of state support is the provision of services and infrastructure of agrarian activity: it is important to finance the system of knowledge and innovations in the agrarian sector, compliance with inspection and control of activities of agrarian companies, provision of financing of infrastructure development and marketing of business activities in the agrarian sector. Thus, according to the results of the simulation of equation (3), the financing of innovation directly and closely affects the value of agrarian production, clarifying the findings of Ayouba et al. (2017), Latruffe, Desjeux (2016), Kristkova, van Dijkand van Meijl (2017). At the same time, GSSE transfers do not directly increase revenues or reduce the costs of the producer of agrarian products, they create favorable conditions for the agrarian sector by developing private or public services, institutions and infrastructure OECD (2021c).

Ukraine, where the share of agrarian production in GDP is much higher than in the European Union and the OECD countries and has a significant agrarian potential, rather limited use of tools to support services in the agrarian sector. More than 60% of such support is directed to the provision of inspection and control, and the sphere of innovation, infrastructure and marketing remains outside the priorities of agrarian policy. Considering the results of analysis and reporting the results of activities, it is advisable to transform the mechanism of business development in the agrarian sector in the direction of providing those tools, which are focused on innovation, decomposition of knowledge, infrastructure services through the optimization (reduction) of support for inspection and control (simplification of registration procedures, certification, regulation of inspection activities).

Corresponding tools priority methods for the development of entrepreneurial activity in the agrarian sector of Ukraine can be defined:

in the framework of support of knowledge and innovation system: promotion of creation of sectoral knowledge through methods of organizational training, development of systems of generation and exchange of information between public and private subjects of entrepreneurship in the agrarian sector at the macro-, meso- and international levels, activation of innovation activities. Such support provides not only an increase in the current indicators of development of entrepreneurship in the agrarian sector but is also important for the future sustainability of agrarian production. Advanced knowledge and innovations make it possible to develop climate-resistant plant varieties, increase crop yields, use agro-drones to monitor crops and develop other measures to improve the performance of agrarian activities;

within the development of the infrastructure of the agrarian sector it is advisable to pay attention to the modernization of logistics and transport routes, engineering of systems of energy and water supply, and heat supply. These methods will not only affect the promotion of entrepreneurial activity, but also the growth of performance indicators of the industry for cost reduction, will make it more attractive for investment.

Optimization of the amount of support from the inspection and control, namely phytosanitary, veterinary and food safety, should be based on the results of auditing and reorganization of the relevant state inspection and control bodies, quality assessment and performance of their activities, improvement of food standards and technical regulation systems. On the one hand, such systems should contribute to the development of relations in the agrarian market, eliminating excessive administrative barriers, on the other hand - to guarantee the safety and quality of agrarian products. It is also advisable to strengthen the personal responsibility of the manufacturer of agrarian products and its quality and safety for consumers.

Reform of agrarian policy to solve these problems by creating favorable conditions for effective business, coordination and communication of participants in the agrarian market, including international, contributing to the export from the decay of logistics and transport systems.

CONCLUSION

The purpose of this study was to establish effective state instruments for the development of entrepreneurial activity in the agricultural sector of Ukraine (based on the experience of EU and OECD countries).

The results allowed to establish that the growth of the total value of the agrarian sector output is determined not so much by the amount of total state support provided to the agrarian sector, as by the types and structural volumes of this support. The conducted research on the example of panel data of the European Union and OECD 1986-2020 show that the most effective direction of support for business development is the state support of services in the agrarian sphere and less effective impact of producer and consumer support. At the same time, support services in the agrarian sector brings the result both to producers and consumers, as well as society as a whole through the development of entrepreneurship and the economy as a whole.

Priority tools for the development of entrepreneurial activity in the agrarian sector are defined, which are concluded in the framework of support services: the system of knowledge and innovation in the agrarian sphere, inspection and control, development and support of infrastructure and support of marketing and promotion. The limited support of innovation and infrastructure development and excessive support of inspection and control measures were established in Ukraine. It is important to emphasize that the results proved the feasibility of directions of transformation of the system of instruments of development of entrepreneurial activity in the agrarian sector of Ukraine by providing those tools that are aimed at innovative activities, decomposition of knowledge system, infrastructure services by optimizing (reducing) support of inspection and control (simplification of registration procedures, certification, regulation of inspection activities), the amount of which is significantly overstated in the regulation.

The totality of the received provisions is of fundamental importance for the development of agrarian policy of Ukraine, allowing to reduce direct assistance to producers by creating favorable conditions for effective entrepreneurial activity, strengthening coordination and communication of participants of the agrarian market, including international. So, the agrarian policy of development of entrepreneurship in the agrarian sector must be both consistent in

the application of appropriate tools and optimal in terms of emphasis and those areas of support, providing greater efficiency of decomposition of the potential of entrepreneurship. Agrarian policy of development of entrepreneurial activity in the agrarian sector of Ukraine, transformed by certain priority tools, will consider the indicators of growth and sustainability of entrepreneurial activity in the future.

A promising future research and scientific discussions will determine the predicted effectiveness of the proposed instruments for the development of entrepreneurial activity of the agrarian sector of Ukraine.

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State tools for the development of entrepreneurial activity in the agrarian sphere

Instrumentos estatais para o desenvolvimento da atividade empresarial na esfera agrária

Herramientas estatales para el desarrollo de la actividad empresarial en el ámbito agrario

Resumo

O objetivo do trabalho é estabelecer instrumentos estatais eficazes para o desenvolvimento da atividade empresarial no setor agrário da Ucrânia. Para atingir o objetivo, uma série de métodos de análise econômico-matemática foram utilizados por dados de painéis de países da UE e da OCDE para o período 1986-2020: um modelo de regressão da relação entre o valor total da produção agrária e o apoio integral prestado ao setor agrário, tipos estruturais e volumes desse apoio; estatísticas de regressão de dependência, métodos de análise comparativa e análise gráfica. Os resultados permitiram estabelecer que a mudança no valor total da produção no setor agrário em 96,79% é determinada pelos tipos e volumes estruturais de apoio estatal concedidos ao setor agrário. Para o desenvolvimento da atividade empresarial no setor agrário da Ucrânia é aconselhável ativar o sistema de apoio estatal para o conhecimento e a inovação, as infraestruturas da esfera agrária e otimizar as medidas de fiscalização e controle, prevalecer significativamente entre os instrumentos regulatórios internos da esfera agrária.

Palavras-chave: Política agrária. Regulação. Apoio. Inovação. Ucrânia.

Abstract

The aim of the work is to establish effective state instruments of development of entrepreneurial activity in the agrarian sector of Ukraine. For the realization of the purpose was used a number of economic-mathematical methods of analysis by panel data of EU and OECD countries for the period 1986-2020: regression modeling of relationships between the total value of agrarian production and total support, rendered to agrarian sector, types and structural volumes of such support; regression dependence statistics, methods of comparative analysis and graphics analysis. The results allowed us to establish that the change in the total production value of the agrarian sector by 96,79% is determined by the types and structural volumes of state support provided to the agrarian sector. For the development of entrepreneurial activity in the agrarian sector of Ukraine it is advisable to activate state support of knowledge and innovation system, infrastructure of agrarian sphere and optimize measures of inspection and control, significantly prevail among the tools of domestic regulation of the agrarian sphere.

Keywords: Agrarian policy. Regulation. Support. Innovation. Ukraine.

Resumen

El objetivo del trabajo es establecer instrumentos estatales eficaces de desarrollo de la actividad empresarial en el sector agrario de Ucrania. Se utilizó una serie de métodos económico-matemáticos de análisis por los datos del panel de la UE y los países de la OCDE para el período 1986-2020: el modelado de regresión de las relaciones entre el valor total de la producción agraria y el apoyo total, prestado al sector agrario, los tipos y los volúmenes estructurales de dicho apoyo; estadísticas de dependencia de regresión, los métodos de análisis comparativo y análisis gráfico. Los resultados permitieron establecer que el cambio en el valor total de la producción del sector agrario en un 96,79% está determinado por los tipos y volúmenes estructurales del apoyo estatal prestado al sector agrario. Para el desarrollo de la actividad empresarial en el sector agrario de Ucrania es aconsejable activar el apoyo estatal del sistema de conocimiento e innovación, la infraestructura de la esfera agraria y optimizar las medidas de inspección y control, que prevalecen significativamente entre las herramientas de regulación interna de la esfera agraria.

Palabras-clave: Política Agraria. Regulación. Apoyo. Innovación. Ucrania.