# The Impact of State Control on the Effectiveness of Agricultural Production Regulation

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Abstract: The article summarizes the scientific and theoretical achievements of the impact of state control on agricultural production. The relevance of the chosen topic is due to changes in political, economic, and global economic realities in the domestic and foreign agrarian markets and Ukraine's role in shaping food security in the international arena. This is confirmed by the volume of agricultural exports. It is shown that Ukraine lags far behind the developed countries regarding PSE and MPS. Therefore, the issue of forming an effective state mechanism for regulating agricultural production requires constant monitoring of the state of the industry's problems, taking into account the foreign experience of regulatory agricultural policy of developed countries, harmonization of the legal framework with global analogs, and EU Directives, strengthening of investment and credit policy in terms of supporting small and medium-sized farming, and focus on sustainable development of all agricultural sectors (crop and livestock production). Because of the Russian aggression on the territory of Ukraine, the issues of reviving agrarian production in the liberated territories, restoring lost resources (land, flora, and fauna), rehabilitation of the economically active population (involvement of the mobilized military in agricultural production, etc.) are of great importance.

**Keywords:** Agricultural policy, Control, Lending, Market price support, Price, Producer support, State.

# 1. INTRODUCTION

The state economic policy determines the level and conditions necessary for the Ukrainian agricultural sector development. The latter is considered as a system of measures specially designed and implemented to influence economic processes in the national economy in order to give them a particular direction of development (Sumets et al., 2022). The economic policy is implemented with the help of appropriate tools, the use of which is aimed at achieving the goals set by the economic system of society, providing the necessary means of functioning.

The Russian invasion has caused a severe blow to Ukrainian agriculture (Bazaluk et al., 2022). It is crucial to support the production capacity of the agricultural sector and to facilitate the marketing of farm products, including for export, to ensure the survival of Ukrainian farmers and to preserve global supplies, thereby contributing to global food security (Tymoshenko et al., 2022).

### 2. LITERATURE REVIEW

The need for state control of agriculture is widely discussed (Halkin, 2022; Melnyk, 2019) and criticized (Rossokha, Sharapa, 2016; Babenko, Bondarevska, 2014; Hryhorieva, 2019; Dvigun et al., 2022) in the scientific literature. Based on this, numerous approaches to classifying models of state influence on agriculture have been developed (Maistro,

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2006; Matviienko, 2017; Aleinikova, 2011; Rahman et al., 2022). The generalization of foreign experience in state regulation of agricultural production is presented in the works of V. Halkin (2022) and S. V. Maistro (2006).

The scientific opinions presented in the literature should be analyzed in the light of P. Shvedenko (2016), who defines the state's role in the agricultural sector due to the limited intervention of the state using monetary instruments of macroeconomic policy. S. Poperechnyi and O. Salamatin (2020) substantiate the need to strengthen state control over the targeted use of financial support for agricultural production.

The organizational and economic mechanism of state regulation and control during the formation of market relations was studied in the works by Gnatyuk (2001), Kravchuk (2011), Aleinikova (2011), Babenko and Bondarevska (2014), Halytskyi, Livinskyi and Diachenko (2019).

Recent publications by foreign researchers focus on the disruptive impact of Russia's military aggression on Ukraine's agricultural sector and the need to strengthen the state's role in its recovery (Glauber, Laborde, 2022; Novak et al., 2022; Cramon-Taubadel, Nivievskyi, 2022; Nivievskyi et al., 2023).

The legal foundations for forming a system of state control and regulation of agricultural production are highlighted in the works by Urkevych, Shulha, Bilinska (2014), Shvedenko (2016), Hryhorieva (2019), and Halanets (2019).

#### 3. AIMS

This study has the following purposes:

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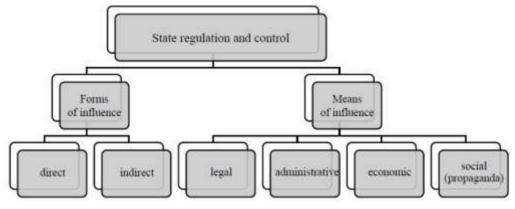


Fig. (1). Forms and means of state influence on the agricultural production regulation.

Source: compiled by the author based on (Hryhorieva, 2019; Halanets, 2019; Skydan et al., 2023).

- to identify the impact of state control on the effectiveness of agricultural production regulation in the modern world;
- to assess the state support for agriculture in Ukraine and compared to developed countries;
- to identify priority areas for developing state regulatory agricultural policy in Ukraine in the future for sustainable agricultural development.

# 4. METHODS

The analysis of the state control impact on the effectiveness of agricultural production regulation employs general scientific and unique methods of scientific knowledge of economic phenomena and processes. Specifically, the research is based on such methods as:

- method of abstraction (when transitioning from theoretical generalizations to practical conclusions);
- monographic method (in processing scientific sources);
- graphical method (for displaying research results);
- analysis method (studying changes in agricultural production's gross output based on the PSE indicator);
- logical method (summarizing and forming conclusions).

The research relied on the information base, including works by foreign and domestic scientists, normative legal acts shaping agricultural policy in Ukraine, statistical data from the State Statistics Service of Ukraine (SSSU, 2023), the Ministry of Agricultural Policy and Food (MAPF, 2023), the Organisation for Economic Cooperation and Development (OECD, 2022), the Food and Agriculture Organization (FAO, 2022), and the National Bank of Ukraine (NBU, 2023).

# 5. RESULTS AND DISCUSSIONS

The implementation of state regulatory policy in Ukrainian agriculture is complex and multifaceted. Globalization processes in the world economy and the peculiarities of domes-

tic agricultural development necessitate the search for alternative state policies for controlling and regulating the industry compared to the approaches commonly adopted by economically developed countries worldwide. The state agrarian policy for agricultural control must align with the principles of the WTO and the policies of European Union countries.

The main components of state control over agricultural production are regulation and support. Direct influence on the functioning of agriculture is exercised through budget regulation, the establishment of government programs, executive orders, as well as social regulation (Fig. 1).

State authorities of executive power are endowed with powers to allocate budget funds for various purposes. The main state bodies responsible for regulating agricultural production in Ukraine are the Ministry of Agrarian Policy and Food (MAPF, 2023) and the Ministry of Finance (MFU). The fundamental principles of Ukraine's agricultural policy regarding production regulation are formulated in several key laws. They include the Law on Special State Support (The Law of Ukraine, No. 1877-IV, 2004), the Tax Code of Ukraine (TCU, 2023) regulating import (The Law of Ukraine, No. 468/97-VR, 1997), and the Law on the State Biosafety System for the Use and Creation of GMO Products (The Law of Ukraine, No. 1103-V, 2023).

The content of state regulation in agriculture is determined by Ukraine's agricultural policy and specified in the Law (The Law of Ukraine, No. 1877, 2004), which outlines the main directions for improving the state regulation system in the farming sector. Firstly, this involves reforming the system of executive authorities responsible for agricultural regulation by revising and clearly defining their powers and introducing direct subordination starting from the regional level, aligning it with EU standards.

Undoubtedly, the practical implementation of this provision is of great importance for improving state regulation in the agricultural sphere. Currently, many bodies carry out this activity, which can be categorized into general, functional, and sectoral competence.

The general competence bodies traditionally include the Verkhovna Rada of Ukraine, the President of Ukraine, and the Cabinet of Ministers of Ukraine. They ensure the imple-

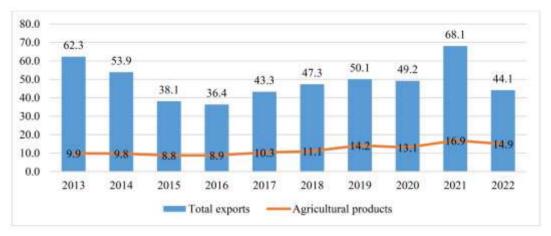


Fig. (2). Dynamics of product exports in Ukraine, billion USD. Source: (SSSU, 2023).

mentation of a unified state agricultural policy. Their primary regulatory function is legislative, where they adopt normative-legal acts aimed at regulating relations related to ensuring food security, taxation, establishing the legal status of agricultural producers, supporting rural social development, product quality, state support for agriculture, etc.

The objects of state legal regulation by general competence bodies encompass all sectors of agricultural production. The functional competence bodies include ministries, the National Bank of Ukraine, the Antimonopoly Committee of Ukraine, the State Property Fund of Ukraine, and other central executive bodies, which are responsible for intersectoral state governance functions and establish the legal framework for the activities of all economic entities, including agricultural producers.

At the same time, the government may also provide subsidies to agricultural producers to cover credit bank interest rates (Bilochenko, 2023). Such powers are vested in authorized bodies that allocate a portion of the budget funds to implement social, scientific, and other programs, ordering the production of certain goods and services by enterprises in healthcare, defense, etc.

Thus, this directs agricultural production in a specific direction necessary for the state, including social regulation, such as state social insurance. It involves measures for pension provision, assistance to disabled individuals, children, and other categories of the rural population in need, as well as health and life insurance for people.

Indirect regulation of the agricultural sector of the economy is carried out through the taxation system by appointing and differentiating tax rates, exemptions, and tax relief, as well as utilizing the credit mechanism of regulation. The National Bank of Ukraine (NBU) determines the maximum interest rates for loans and thus governs the state management of issuance and the overall money supply, contributing to the economy's efficiency (NBU, 2023). Another lever is price which analysts have recently criticized regulation, (Yurchyshyna, 2017; Nechiporenko, 2018). Price regulation is achieved by setting maximum prices for certain socially significant types of agricultural products, goods, and services. It also involves establishing maximum levels of profitability for monopolistic enterprises and parameters that determine price levels (Hryhorieva, 2009; NCR, 2022; Welsh and Dodd, 2022).

The main tasks of the Ministry of Agrarian Policy and Food of Ukraine (MAPF) include the formation and implementation of:

- State agrarian policy aimed at developing the agricultural sector of the economy and ensuring the country's food security.
- State policies in the fields of agricultural production, namely: animal husbandry, horticulture, seed production, nurseries, viticulture, food, and processing industry, engineering and technical support of the agro-industrial complex and agricultural machinery, and agricultural advisory activities.
- State policies in fisheries and fishery industry, protection, use, and reproduction of aquatic living resources, regulation of fishing and safety of fishing vessels, veterinary medicine, food and feed safety, quarantine and plant protection, and protection of plant varieties.
- State policies on land relations, topography, geodetic, cartographic activities, forestry, and hunting (NCR, 2022; MAPF, 2023).

An effective agricultural policy is crucial for sustainably meeting the growing demand for safe and nutritious food products. Despite the increasing demand for food, feed, fuel, and fiber offering significant opportunities for agriculture, government policies should address challenges such as increasing productivity, enhancing ecological resilience, including reducing greenhouse gas emissions, and improving adaptation and resilience to climate change and other unforeseen shocks (OECD, 2022).

FAO estimates that the war caused total losses of \$2.2 billion to the agrarian sector, while the overall losses amount to \$28.3 billion. These losses include partially and completely destroying machinery, equipment, facilities, livestock, and perennial crops. The annual export of agricultural products before the war was \$27.8 billion, accounting for 41% of Ukraine's total exports (FAO, 2022).

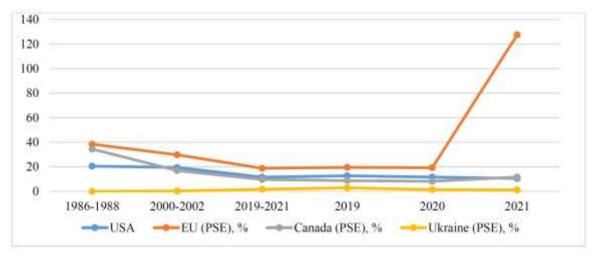


Fig. (3). Assessment of agricultural support in Ukraine and EU countries, %.

Source: (OECD, 2022a).

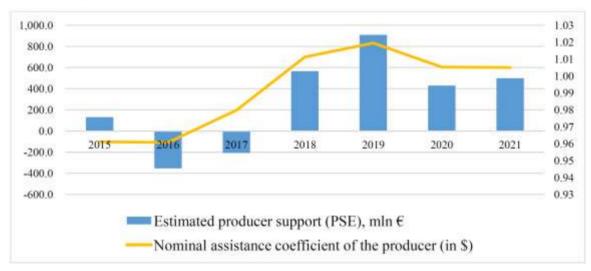


Fig. (4). Assessment of support for agricultural producers in Ukraine, 2015-2021.

Source: (OECD, 2022a).

The overall exports and agricultural product exports during 2016-2021 showed a positive trend (Fig. 2). However, despite a significant decrease in overall exports in 2022 compared to the previous year – by 35%, through joint efforts of the Ukrainian government and foreign partners, the export of agricultural products decreased only by 11.8%.

Before the Russian invasion, 98% of Ukraine's grain exports were transported through the Black Sea. During the first few months of the war, Ukrainian shipping was halted, impacting global food security. In response, the United Nations advocated for the Black Sea Grain Initiative (BSGI), facilitating grain exports from three ports in Odesa to Turkey. Despite the agreement, trade volumes through the Black Sea remain below pre-war levels, and Ukraine heavily relies on railway, road, and barge routes for agricultural exports.

In June 2022, the UN's Food and Agriculture Organization (FAO) estimated that the war cost \$4 to \$6 billion for Ukrainian agriculture. The damage to agricultural machinery was valued at \$926.1 million (2,281 units), damaged or de-

stroyed grain storage facilities amounted to \$272 million, and the loss of livestock was estimated at around \$136 million.

State support for agriculture has increased in recent years in response to global crises, but only a tiny portion has been directed towards long-term goals such as climate change and other food system issues. The OECD Report on Monitoring and Evaluating Agricultural Policies oversees these efforts and provides governments with policy decisions. The support for agricultural producers in Ukraine is measured by the Producer Support Estimate (PSE) indicator, which has been significantly lower than in other countries (Fig. 3-4). PSE has been unstable over the last three decades, mainly due to fluctuations in market price support (MPS). However, in recent years, PSE fluctuations have reduced, averaging 1.7% of agricultural enterprise gross receipts during 2019-2021.

During most of the past two decades, the Producer Price Index (PPI) has been negative, with average manufacturer prices lower than international benchmark levels but with

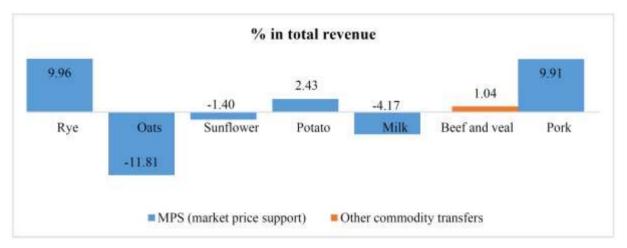


Fig. (5). Tariff protection of national agricultural prices in Ukraine, 2019-2021.

Source: (OECD, 2022a).

Table 1. Assessment of support for agriculture in Ukraine, in USD million.

Indicators	2000-2002	2019-2021	2019	2020	2021
The total cost of production, mln USD	9619	40481	35426	34579	51437
Including the share of MPS products, %.	86,77	84,88	84,45	84,74	85,44
The total cost of consumption, mln USD	8841	26998	25202	24112	31680
Amount of producer support, mln USD	24	699	1018	490	590
Support based on commodity products, mln USD	-443	376	684	184	261
PSE (producer support estimate), %.	0,26	1,7	2,85	1,41	1,14
Nominal protection coefficient (NPC)	0,95	1,01	1,02	1,01	1,01
Nominal assistance coefficient (NAC)	1,00	1,02	1,03	1,01	1,01
GSSE percentage, % TSE	-	25,53	17,90	31,32	31,22
Consumer Support Expenditure (CSE), mln USD	408	-367	-694	-192	-214

Source: OECD (2022), Producer and Consumer Support Estimates, OECD Agriculture statistics (database).

Note: NAC: nominal assistance coefficient (sown area/number of livestock/income/revenue).

significant fluctuations depending on goods and time. Thanks to tariff protection, domestic prices for meat products and sugar have been higher than international reference levels, while prices for most grains and milk have generally been lower than global ones (see Fig. 5).

According to the OECD, the share of Ukraine's commodity transfers in gross merchandise revenue in 2019-2021 was highest for sugar (MPS=73.85%), rye (MPS=9.96%), and pork (MPS=9.91%) (see the Table 1).

MPS: The support of market prices without producer fees and extra feed costs. MPS products for Ukraine are wheat, corn, rye, barley, oats, sunflower, sugar, potatoes, milk, beef and veal, pork, poultry, and eggs.

Single Commodity Transfers (SCTs) mainly include Market Price Support (MPS), with sugar, wheat, and pork receiving the highest support, while oats and potatoes, to a lesser extent, and milk and sunflower seeds, implicitly, are subject to taxation.

Budgetary support to farmers, mainly in the form of tax credits and production assistance in the form of short-term credits and capital formation, accounts for less than 1% of the gross income of farming households, but over the last four years, it has contributed to the overall support of the agricultural sector. Since 2020, additional support has been provided in the context of the COVID-19 pandemic, but it remains low, constituting 0.4% of fiscal support to producers in 2020 and 1.8% in 2021 (NBU, 2023).

Support for general services has increased since 2015 but remains low compared to other countries. During 2019-2021, the estimated value of General Services Support (ESSG) averaged 0.6% of the value of agricultural production, which is half of the level seen in the early 2000s. Most of these expenditures are related to inspection and control services (KSE Agrocenter, 2023).

Overall support for agricultural production has slightly increased as a proportion of the Gross Domestic Product (GDP) of the country, from 0.4% of GDP to 0.6% of GDP, in the period from 2000-2002 to 2019-2021 (United Nations, 2023; SSSU, 2023).

The government continued to develop legislation to strengthen the agricultural land market - since July 2021, Ukrainian citizens can buy up to 100 hectares of agricultural land, and from January 2024, this possibility is planned to be extended to the purchase of up to 10,000 hectares by Ukrainian individuals and legal entities. New laws have been passed concerning land documentation, registration, evaluation, and disposal of state-owned land (The Law of Ukraine, No. 1423-IX, 2021; No. 2145-IX, 2022; No. 2247-IX, 2022).

A new Partial Credit Guarantee Fund in agriculture has been created, providing credit guarantees to small and medium-sized farms and agricultural enterprises cultivating up to 500 hectares of land. Legislative support for agrarian insurance has also been adopted, compensating farmers for up to 60% of insurance premiums.

Several environmental-related legislative acts have been adopted, including the National Environmental Action Plan until 2025, as well as laws to strengthen forest and peatland protection, encourage large-scale afforestation, and support the development of organic farming.

Today, the basis of Ukraine's food security is formed by small agricultural producers. In 2022, the European Union allocated EUR 50 million to support small farmers, extending this program to 2023. The European budgetary support includes a special budget subsidy per 1 hectare of cultivated agricultural land (UAH3,100, but not exceeding 372,000 UAH per individual producer) and support for maintaining large livestock (including cows) in areas favorable for dairy farming (5,300 UAH per cow, but not exceeding UAH 530,000 per individual producer) (MAPF, 2023).

In 2022, this support was provided through the budget program "Support for Farmer Farms and Other Producers of Agricultural Products" (the Code of Program Classification of Expenditures and Lending of local budgets – CPCEL 2801500) by the Ukrainian State Fund for Farmer Farm Support.

Once the war ends, the Ukrainian government will resume the implementation of its Irrigation and Drainage Strategy, encouraging farmers to invest in irrigation and drainage technologies. This strategy will also create opportunities for government procurement related to engineering land reclamation systems.

The sustainable development of Ukrainian agriculture will be ensured in the long term with a rational and targeted approach to regulatory agrarian policies, considering various forms of economic activity, specialization directions, market conditions in domestic and foreign markets, and adaptation to global economic trends.

# 6. CONCLUSIONS

In the face of modern challenges and threats, Ukraine must preserve its status as an agrarian country. This status not only ensures the country's food security but also plays a crucial role on the global stage.

The main directions of the state's influence to increase agricultural production should be:

 Adaptation of the regulatory framework of land legislation to market and political changes in the country.

- Harmonization of Ukrainian legislation with European and global standards regarding the quality and safety of food.
- Stimulating the development of all management forms in the agrarian sector of Ukraine's economy, limiting the monopolization of agroholdings.
- Diversification of the preferential lending and investment system for small and medium-sized farming enterprises.
- Activation of the insurance mechanism for crops and livestock against natural disasters and unforeseen circumstances for different agricultural formations (diversification of approaches) based on social justice.
- Formation of a motivational mechanism for developing sustainable agricultural production in united territorial communities to rehabilitate military and civilian populations in the post-war period.

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