CENTRE FOR ECONOMIC STRATEGY

POLICY PAPER

HOW TO INTEGRATE UKRAINIAN AGRICULTURAL SECTOR INTO THE INTERNAL MARKET AND THE EU COMMON AGRICULTURAL POLICY?

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The contents of this study do not necessarily reflect the views of ISAR Ednannia, the views of the United States Agency for International Development, or the US Government.

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The Centre for Economic Strategy is an independent centre for public policy research. CES's mission is to support reforms in Ukraine in order to achieve sustainable economic growth. The Centre contributes to the development of Ukraine's economic growth strategy, provides independent analysis of the most important aspects of state policy, and works to strengthen public support for reforms. The Centre was founded in May 2015.

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1. SUMMARY

"Agriculture and rural development" is the 11th of 35 chapters of Ukraine's negotiations on the EU accession. The EU's demands for agricultural sector transformation have largely determined the course of accession negotiations with Poland[1] in 2004 as well as Bulgaria[2] and Romania[3] in 2007. Most of the candidate countries in the Western Balkans have so far failed to make significant progress in integrating their agricultural sectors into the internal market due to a lack of administrative capacity and inconsistent reforms[4]. Thus, and given the considerable size of the Ukrainian agricultural sector, this chapter may become one of the cornerstones of the negotiations between Ukraine and the European Commission.

This policy paper (the second in a series of studies on challenges and prospects related to the integration of the Ukrainian agricultural sector into the EU) aims to identify the fundamental principles of sectoral integration of the Ukrainian agricultural sector into the EU internal market. The study includes a comparative analysis of the structure of agricultural production in Ukraine and the EU and an inquiry into the directions and the composition of agricultural trade between Ukraine and the EU member states. In addition, we analyse the possible impact of Ukraine's accession to the EU on the Common Agricultural Policy (CAP) budget and the implications of CAP participation for the Ukrainian agricultural sector. As a result, we formulate the main principles and guidelines for sectoral integration of the Ukrainian agro-processing sector into the EU internal market.

2. AGRICULTURE IN UKRAINE AND THE EU: COMPARISON BASED ON KEY INDICATORS

Ukraine's agricultural production model differs significantly from most EU member states. This section analyses the main similarities and differences between the two. We compare general economic indicators, market structure, and production structure of Ukraine and the EU member states.

2.1. COMPARISON BY GENERAL ECONOMIC INDICATORS

Agriculture is critical for Ukraine: the share of value added in agriculture, fisheries, and forestry is significantly higher than in EU member states. Accordingly, 14,7% of Ukraine's employment is in the agricultural sector. About 71,3% of the land is agricultural.

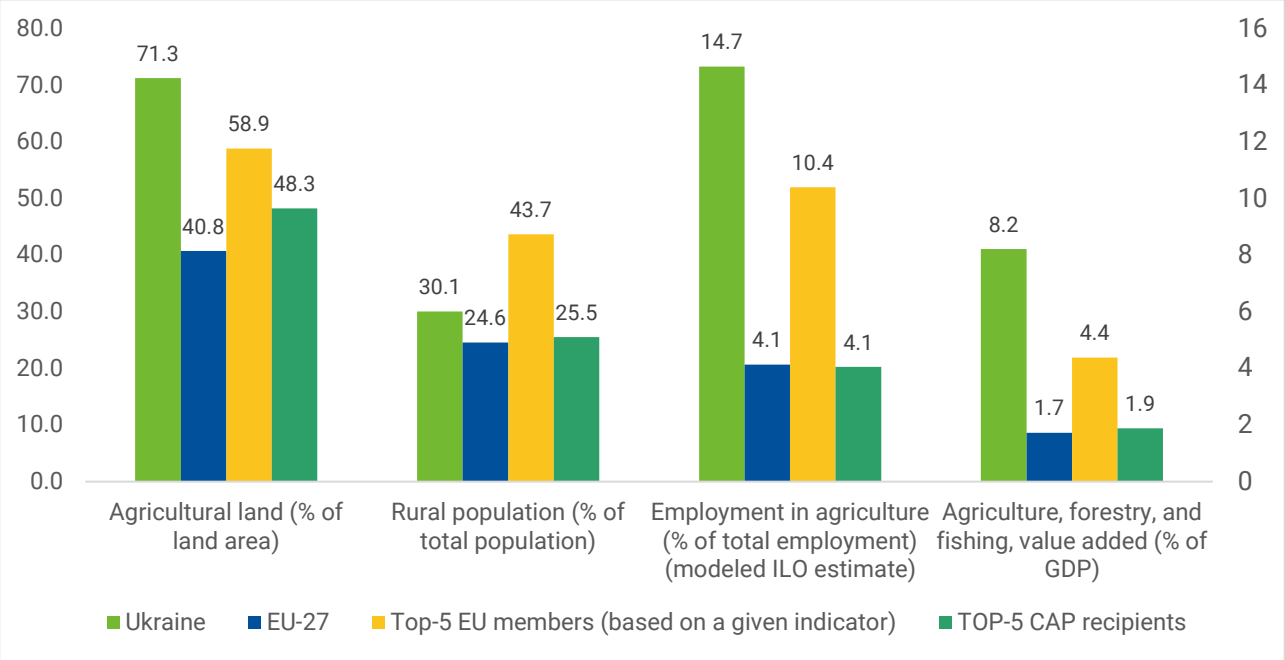
[1] Kowalski, A., Wigier, M., & Chmieliński, P. (2010). ADJUSTMENT OF POLAND'S AGRICULTURE AND FOOD SECTOR TO CHALLENGES OF AGRICULTURAL POLICY OF THE EUROPEAN UNION. Applied Studies in Agribusiness and Commerce, 4, 39-44. https://doi.org/10.19041/APSTRACT/2010/3-4/6.

[2] Sabeva, M. (2020). Effect of Policy Measures Supporting the Agricultural Sector in Bulgaria After EU Membership. Economic Alternatives, 91-104. https://doi.org/10.37075/ea.2020.1.05.

[3] Chivu, L., Vasile, A., & Ciutacu, C. (2017). SIMILARITIES AND DISS IMILARITIES BETWEEN THE EU AGRICULTURAL AND RURAL DEVELOPMENT MODEL AND THE ROMANIAN AGRICULTURE. CHALLENGES AND PERSPECTIVES. Bulgarian Journal of Agricultural Science, 2017.

[4] Erjavec, E., Volk, T., Rednak, M., Ciaian, P., & Lazdinis, M. (2020). Agricultural policies and European Union accession processes in the Western Balkans: aspirations versus reality. Eurasian Geography and Economics, 62, 46-75. https://doi.org/10.1080/15387216.2020.1756886.

Figure 1. Comparison of selected indicators of the agricultural sector in Ukraine and the EU-27



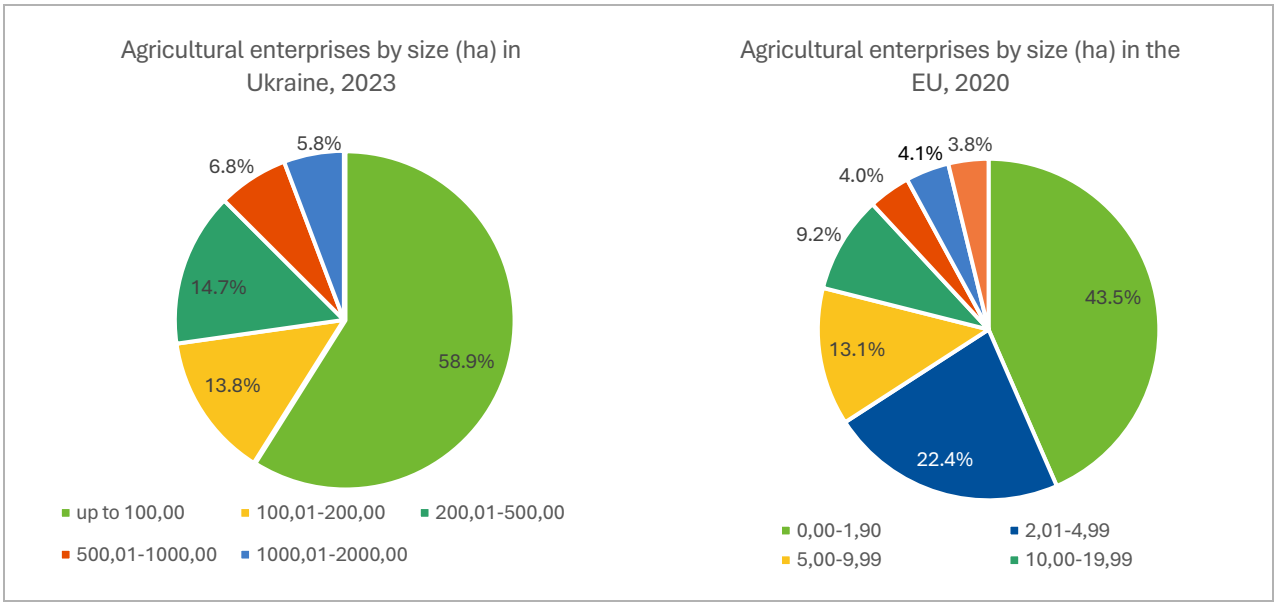
Source: World Bank data.

Note: based on the latest available data (2021 and 2022). The column "Top 5 EU countries (for a particular indicator)" shows the average value for the 5 EU countries with the highest value of the respective indicator. The column "Top 5 CAP recipients" shows the average value of the respective indicator for the 5 EU countries that received the most significant payments from the ERDF ("first pillar") and the ERDF/ ENPI ("second pillar") funds in 2022; the list includes France, Italy, Germany, Poland and Spain.

Smaller farm sizes characterise the EU member states, while Ukraine has large-scale, export-oriented agricultural enterprises. For example, according to the most recent data, Ukrainian enterprises with an area of up to 100 ha account for 58,9% of all agricultural enterprises, while in the EU, the respective figure reaches 96,2%. In addition, as of 2020, 93% of farms in the EU are so-called "family farms", where at least 50% of the labour force is family members[5].

[5] Most of the 9.1 million farms in the EU are family-run - Eurostat (europa.eu)

Figure 2. Share of agricultural enterprises by area of farmland in Ukraine and the EU

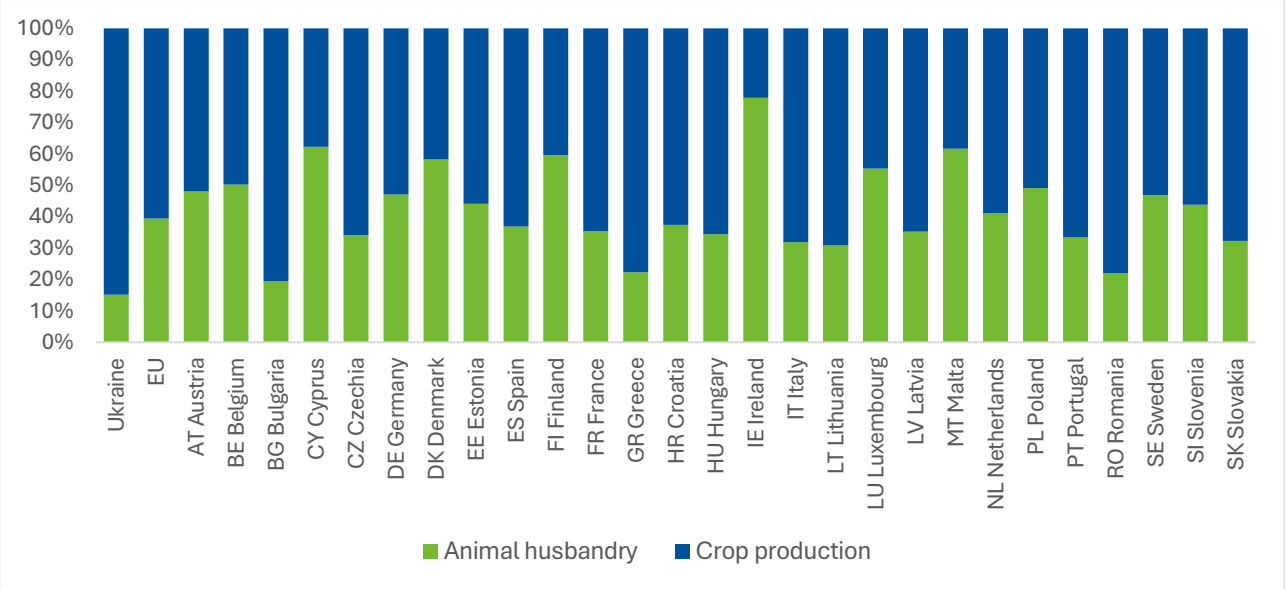


Source: CES visualisation based on the most up-to-date data from the State Statistics Service of Ukraine and Eurostat.

2.2. COMPARISON BY PRODUCTION VOLUME AND STRUCTURE

The structure of Ukrainian agriculture is dominated by crop production. As of 2021, livestock products accounted for only 15,2% of the total value of agricultural output[6] (this share has been decreasing over the past decades). Most EU member states show a more balanced production structure, except for Bulgaria and Romania, which, like Ukraine, specialise in crop production.

Figure 3. Comparison of the structure of agricultural production value in Ukraine, the EU, and EU member states in 2021*



Source: CES calculations and visualisation based on data from the State Statistics Service of Ukraine and Eurostat.

* For Ukraine, the data for 2021 is the most relevant regarding the volume of agricultural output in various categories.

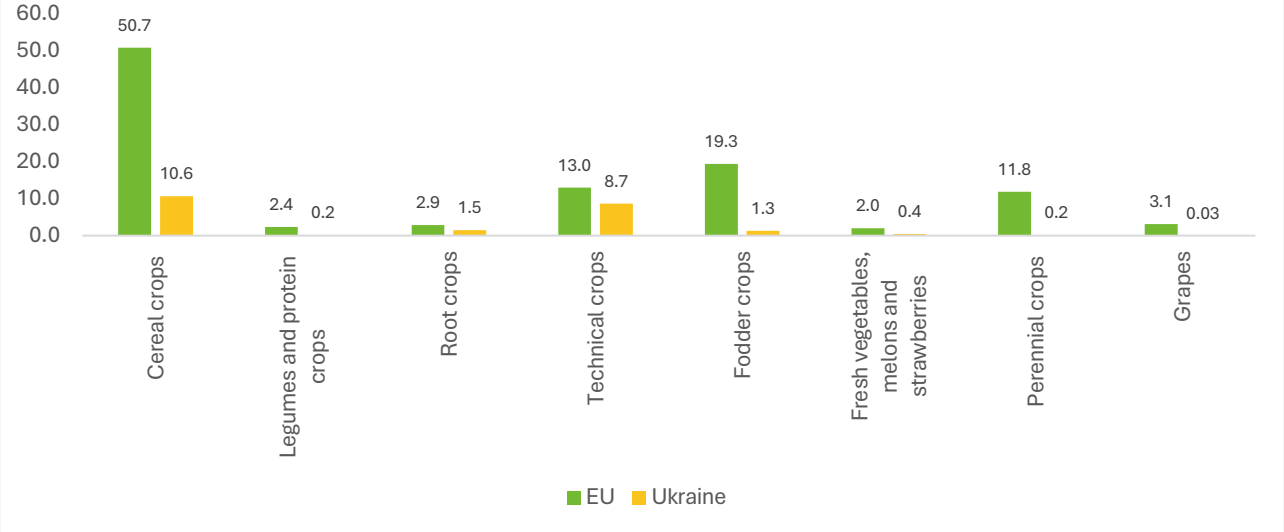
[6] CES calculations based on the State Statistics Service of Ukraine data.

We address the volumes and structure of crop and livestock production in Ukraine and the EU in the following parts of this section.

2.2.1. CROP PRODUCTION

At the end of 2021, the area under crops in Ukraine was about 28,8 mln ha. By the end of 2023, the area of agricultural land had decreased by 20,7%[7] (some territories fell under enemy control, and large areas are mined). The war and the EU's unilateral trade preferences amended the structure of agricultural production in Ukraine between 2021 and 2023: in particular, the share of land devoted to grain crops decreased by 7,9 p.p., while the share of industrial crops increased by 6,6 p.p. Ukraine is abundant with substantial areas of arable land with significant grain and sunflower oil production, making it one of the world's largest producers. In contrast, EU crop production is more diversified: apart from crops requiring specific climatic conditions (e.g., citrus and olives), the share of perennial crops, root crops, and vegetables is higher. The group of fodder crops deserves special attention: in the EU, given the much larger size of the livestock industry than in Ukraine, the demand for feed is higher. In addition, maintaining sufficient "green land" areas is one of the so-called "Green Deal" conditions aimed at protecting the natural environment. The crop production model in Bulgaria and Romania is quite similar to Ukraine's, with cereals and industrial crops playing a pivotal role.

Figure 4. Comparison of the sown area for the key crops in Ukraine and the EU in 2023 (area in mln ha)

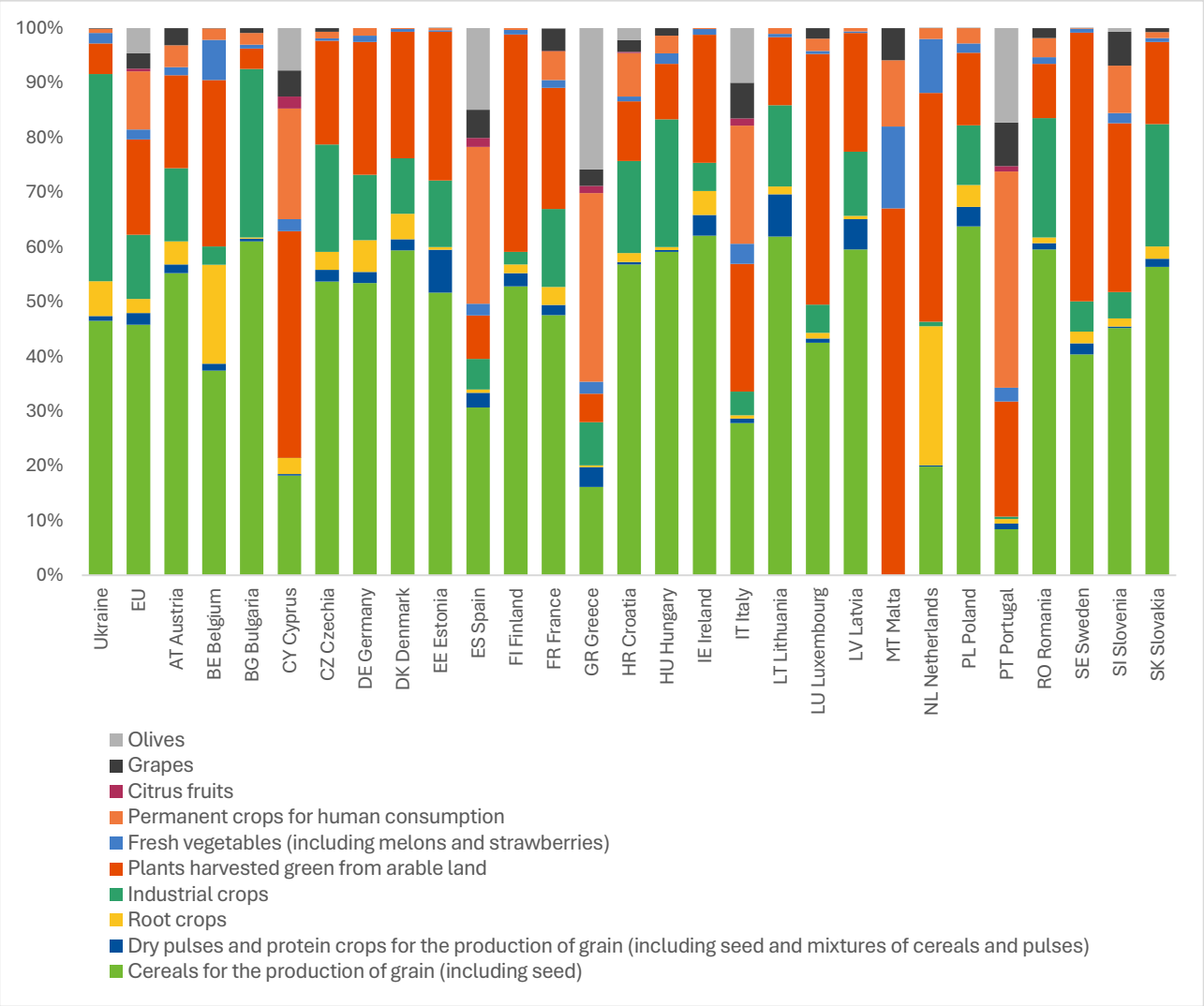


Source: CES calculations and visualisation based on data from the State Statistics Service of Ukraine and Eurostat.

Methodological note: Ukrstat and Eurostat use different approaches to classify crop products, so we used the EU classification and grouped Ukrainian products accordingly. In the case of the EU, the group of fodder crops includes "Plants harvested green from arable land", as the majority of crops in this group are used for fodder production.

[7] CES calculations based on the State Statistics Service of Ukraine data for 2021 and 2021.

Figure 5. Comparison of the structure of crop production in Ukraine, the EU, and EU member states by sown area in 2023 (share of sown area)



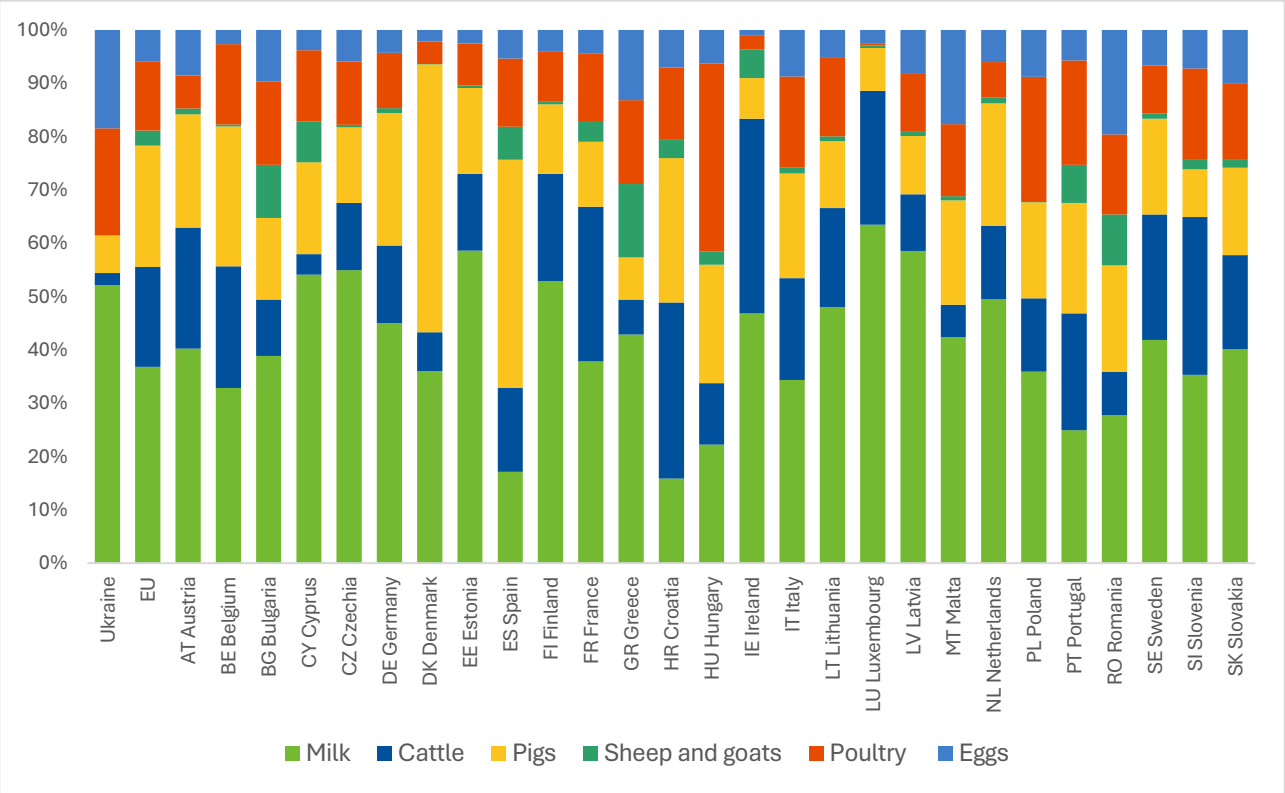
Source: CES calculations and visualisation based on data from the State Statistics Service of Ukraine and Eurostat.

Methodological note: Ukrstat and Eurostat use different approaches to classify crop products, so we used the EU classification and grouped Ukrainian products accordingly. In the case of the EU, the group of fodder crops includes " Plants harvested green from arable land", as the vast majority of crops in this group are used for fodder production.

2.2.2. LIVESTOCK FARMING

As mentioned above, livestock production in Ukraine is less developed than crop production. In contrast to most EU member states, Ukraine has poorly diversified livestock farming, with milk and eggs accounting for the bulk of production. Poultry accounts for the lion's share of the value of livestock.

Figure 6. Comparison of the structure of livestock farming products in Ukraine, the EU, and EU member states by value of production in 2021*



Source: CES calculations and visualisation based on data from the State Statistics Service of Ukraine on agricultural production and prices and Eurostat.

Methodological note: Eurostat provides disaggregated statistics on the value of agricultural production, as opposed to the State Statistics Service; hence, the data for Ukraine are CES estimates.

* The most complete data for Ukraine is available for 2021.

3. AGRICULTURAL TRADE BETWEEN UKRAINE AND THE EU

In 2014, the Association Agreement between Ukraine and the European Union was signed[8]. Establishing a Deep and Comprehensive Free Trade Area intensified international trade between Ukraine and the EU. However, administrative restrictions on agricultural products – tariff quotas – remained in place until June 2022. In June 2022, the EU took the unprecedented step of temporarily lifting the entire scope of restrictions on Ukrainian goods to support the Ukrainian economy during the large-scale war[9]. However, in March 2023, farmers in the EU's "eastern frontier" countries began protests that led to temporary restrictions on imports of Ukrainian wheat, corn, rapeseed, and sunflower seeds authorised by the European Commission[10]. With the expiration of the aforementioned restrictions in September 2023, Polish farmers resumed protests, which lasted until April 2024.

[8] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:22014A0529(01)

[9] Regulation (EU) 2022/870 of the European Parliament and of the Council of 30 May 2022 on temporary trade-liberalisation measures supplementing trade concessions applicable to Ukrainian products under the Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Ukraine, of the other part

[10] Commission adopts exceptional and provisional safeguard measures on limited imports from Ukraine

In January 2024, the European Commission recommended extending autonomous trade preferences for Ukraine from the 6th of June 2024 to the 5th of June 2025[11]. However, the draft regulation also contained provisions on "automatic safeguard measures" (renewal of tariff quotas) for Ukrainian goods that could significantly affect the EU markets. The final list of the aforementioned products includes poultry, eggs, sugar, oats, corn, cereals and honey[12]. In 2023, these goods accounted for 16,6% of the value of Ukraine's exports to the EU, of which 14,1% was maise. Except for the latter, the safeguard measures will not apply to other vital Ukrainian exports to the EU, such as sunflower oil and wheat, which accounted for 7,7% and 5,2% of the total value of European imports from Ukraine in 2023, respectively[13].

The safeguard measures ensure that duty-free imports of seven Ukrainian agricultural products do not exceed the average of the last two and a half years. Two years of duty-free trade with the EU have created some incentives for transformation, and a partial rollback to pre-war tariff quotas will be pretty noticeable for some producers. This applies to sugar producers in particular: between 2022 and 2023, the area planted and gross harvest of sugar beet increased by 35,9% and 32,1%[14], respectively, due to strong demand in the EU and the cancellation of a relatively high basic rate of tariff quotas (33,9 or 41,9 euros per 100 kg, depending on the degree of processing[15]). Although exceeding the tariff quota specified by the Agreement more than 10 times[16], the new limit might block the opportunities for further expansion. Similarly, the ability to export to the EU used to support Ukrainian egg and poultry producers in the face of unstable domestic demand.

While working on the new regulation, the Commission noted the need to review the trade provisions of the Association Agreement (due in 2022). This signal should be interpreted as a willingness to deepen trade relations with Ukraine further but in a more orderly and consistent manner.

The rest of this section is devoted to a detailed analysis of trade in agricultural products between Ukraine and the EU regarding key partners, export and import structure, and trade specialisation of Ukrainian agrarian exporters.

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[11] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on temporary trade-liberalisation measures supplementing trade concessions applicable to Ukrainian products under the Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Ukraine, of the other part - Letter to the Chair of the European Parliament's Committee on International Trade (INTA) - Publications Office of the EU (europa.eu)

[12] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on temporary trade-liberalisation measures supplementing trade concessions applicable to Ukrainian products under the Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Ukraine, of the other part

[13] Source: Centre for Economic Strategy calculations based on Eurostat Comext data (Extra-EU imports since 2010 by partner and other partner, by HS2-4-6 and CN8 (DS-059332)).

[14] CES calculations based on the State Statistics Service data.

[15] See Annex I-A of the Association Agreement.

[16] Source: Centre for Economic Strategy calculations based on Eurostat Comextdata (Extra-EU imports since 2010 by partner and other partner, by HS2-4-6 and CN8 (DS-059332)). Methodological note: the grouping of products by 8-digit codes was carried out in accordance with the provisions of the new regulation, according to the classification of Annex I-A of the Association Agreement: oats, eggs and albumins, cereals (barley groats and meal; cereal grains otherwise worked), honey, poultry (poultry meat and poultry meat products), sugars, maize (maize, floor and pallets). For our calculations, we used the volume of imports of goods produced in Ukraine and arriving in the EU from Ukraine. In order to reduce possible errors due to the common import registration system in EU member states, the EU as a whole was chosen as the destination country for Ukrainian goods.

3.1. DIRECTION AND VOLUME OF TRADE

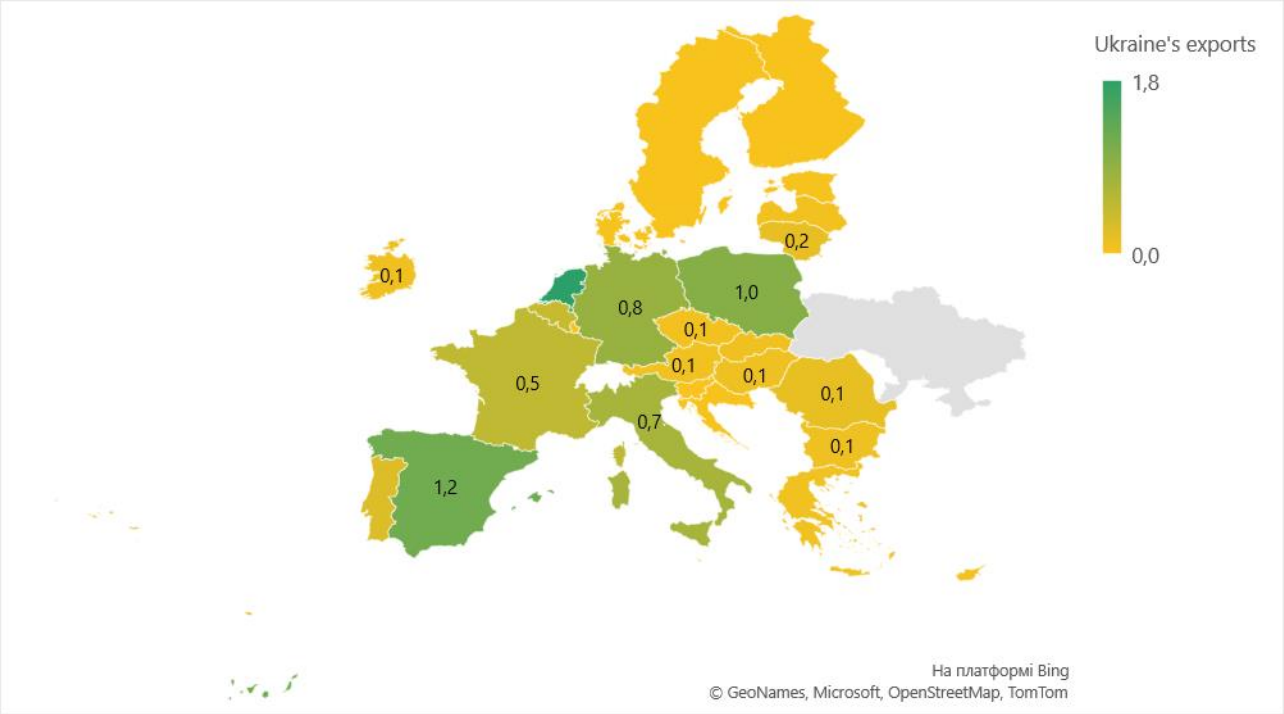
According to the State Customs Service of Ukraine, in 2023, the total value of Ukraine's agricultural exports to the EU was $11,2 bln, while EU member states exported $3,3 bln worth of agricultural goods to Ukraine. Romania, Poland, and Spain were among the top three importers of Ukrainian goods; Ukraine imported the most from Poland, Italy, and Germany.

However, it should be noted that a full-scale war (and, as a result, the loss of some markets), unilateral trade preferences from the European Union, and the periodic blockade of the western borders by Polish farmers have significantly affected international trade patterns in Ukraine. Between 2021 and 2023, Ukraine increased its agricultural exports to the EU by $3,5 bln (although the total volume of Ukrainian agricultural exports decreased by $5,8 bln over the respective period).

Between 2021 and 2023, Ukraine's agricultural exports to Poland increased by more than 50%; however, exports to Romania increased 18-fold (both Poland and Romania required restrictions on Ukrainian agricultural exports to Europe in the spring of 2023; however, unlike Poland, Romanian farmers did not protest after the expiration date of the aforementioned restrictions in September 2023). Poland and Romania import significant volumes of Ukrainian agricultural goods (mainly grain). Still, they share a border with Ukraine: a substantial share of Ukrainian agricultural production eventually ends up in Western Europe.

Apart from a slight increase in volume (by $0,5 bln), there were no significant changes in the structure of Ukrainian agricultural imports from EU between 2021 and 2023.

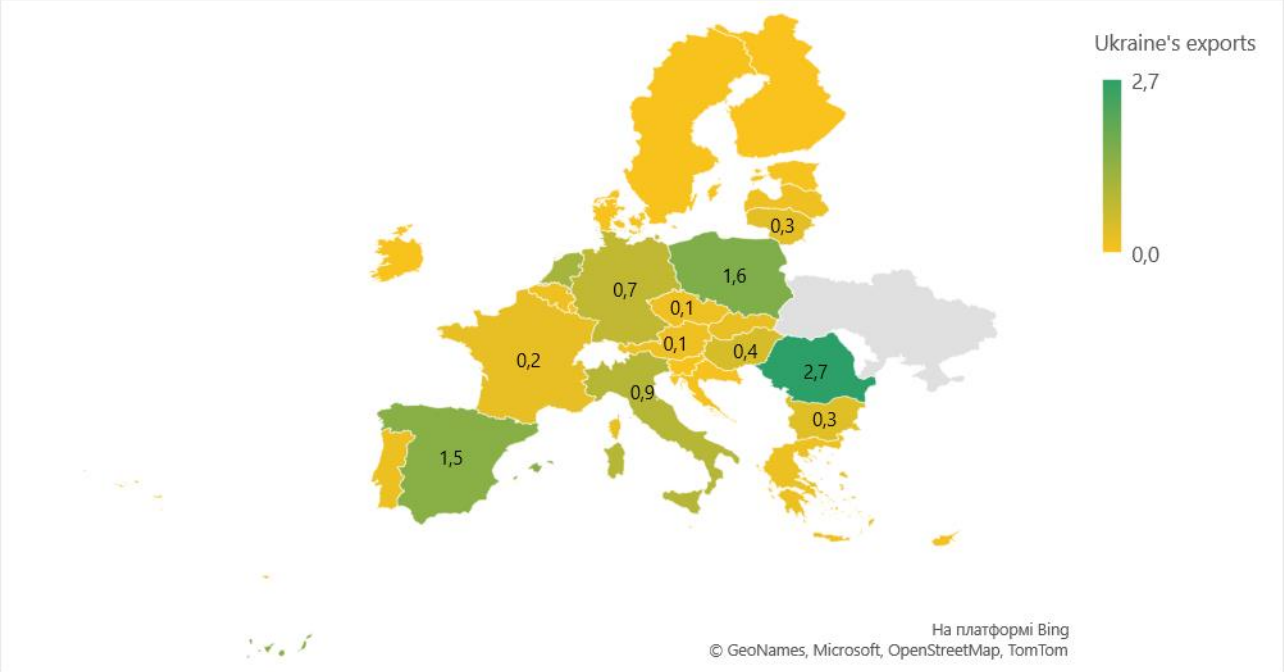
Figure 7.1. Exports of Ukrainian agricultural products to the EU in 2021, $ bln



Source: CES visualisation based on data from the State Customs Service.

Methodological note: the EU uses a general system of foreign trade accounting, while Ukraine uses a special system. Given this, as well as the absence of actual customs borders between EU member states, Ukrainian customs statistics are more reliable when it comes to accounting for trade with individual EU member states. The aggregated values are comparable to the EU trade statistics of Eurostat Comext (Extra-EU imports since 2010 by partner and other partner, by HS2-4-6 and CN8 (DS-059332)).

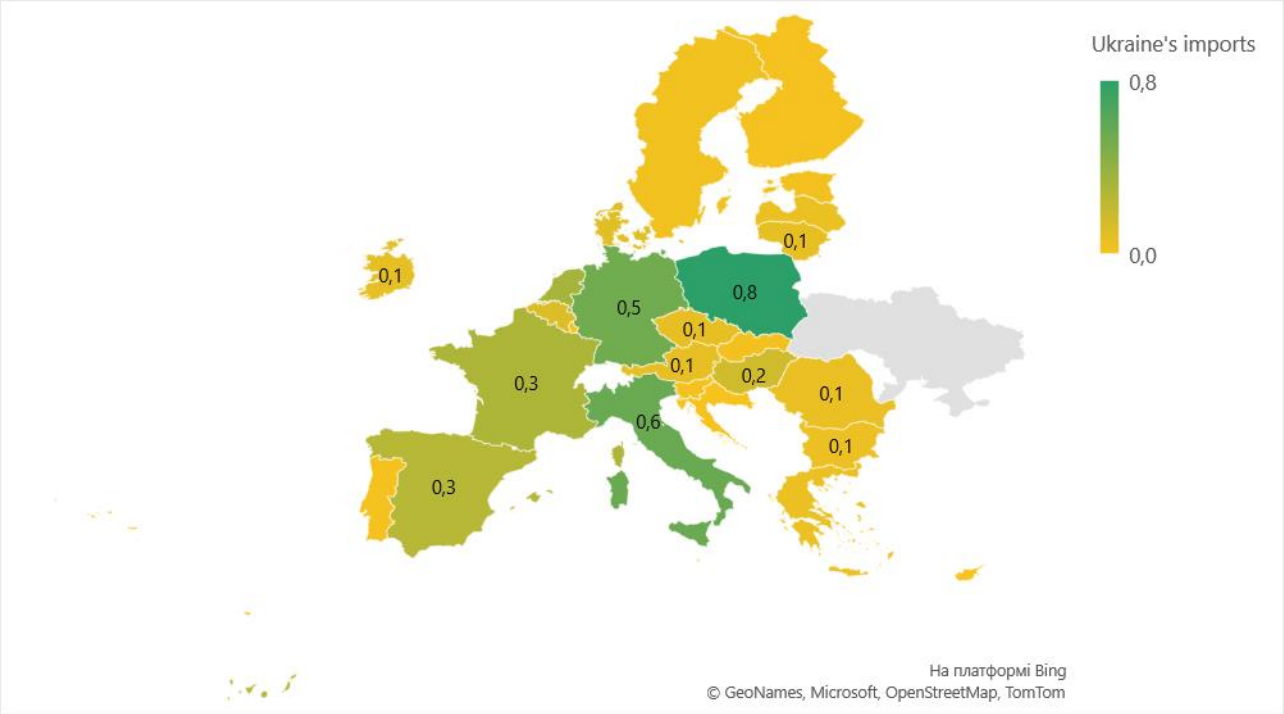
Figure 7.2. Exports of Ukrainian agricultural products to the EU in 2023, $ bln



Source: CES visualisation based on data from the State Customs Service.

Methodological note: the EU uses a general system of foreign trade accounting, while Ukraine uses a special system. Given this, as well as the absence of actual customs borders between EU member states, Ukrainian customs statistics are more reliable when it comes to accounting for trade with individual EU member states. The aggregated values are comparable to the EU trade statistics of Eurostat Comext (Extra-EU imports since 2010 by partner and other partner, by HS2-4-6 and CN8 (DS-059332)).

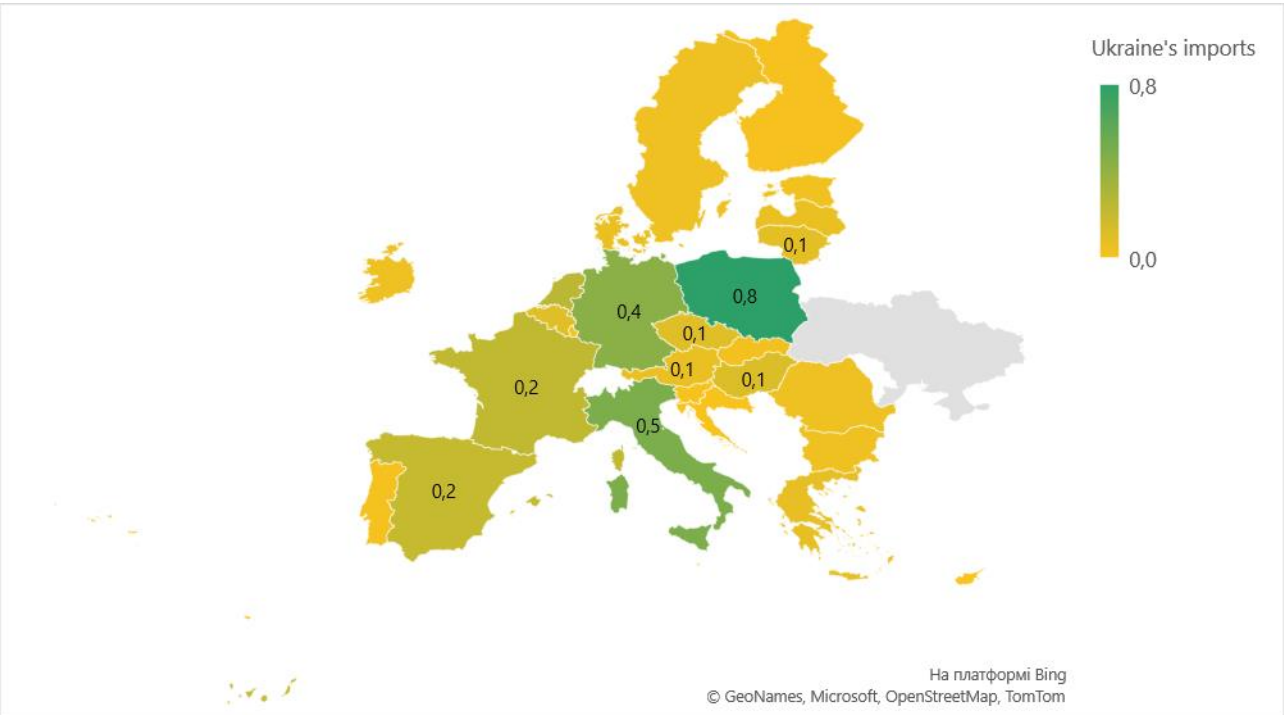
Figure 8.1. Imports of European agricultural products in Ukraine in 2021, $ bln



Source: CES visualisation based on data from the State Customs Service.

Methodological note: the EU uses a general system of foreign trade accounting, while Ukraine uses a special system. Given this, as well as the absence of actual customs borders between EU member states, Ukrainian customs statistics are more reliable when it comes to accounting for trade with individual EU member states.

Figure 8.2. Imports of European agricultural products in Ukraine in 2023, $ bln



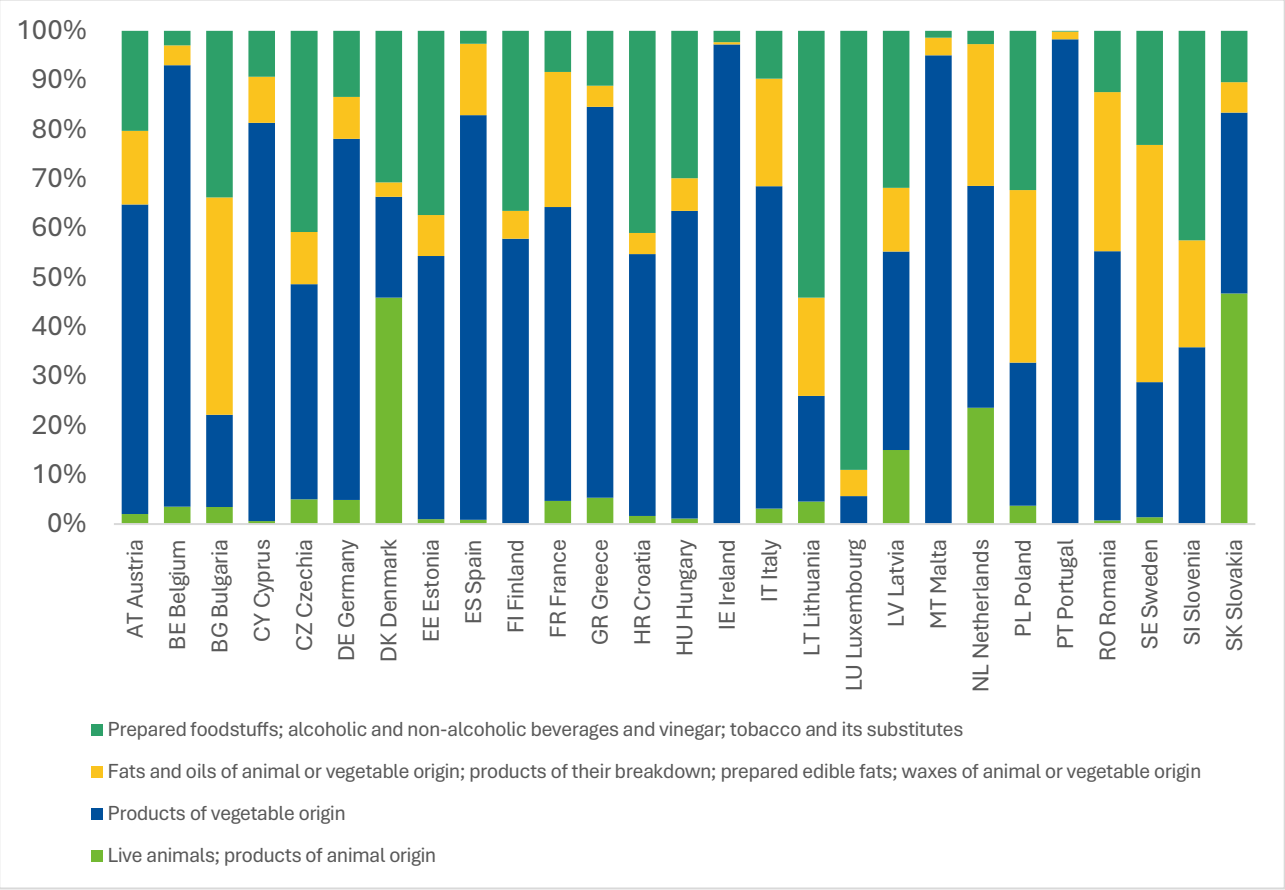
Source: CES visualisation based on data from the State Customs Service.

Methodological note: the EU uses a general system of foreign trade accounting, while Ukraine uses a special system. Given this, as well as the absence of actual customs borders between EU member states, Ukrainian customs statistics are more reliable when it comes to accounting for trade with individual EU member states.

3.2. STRUCTURE OF AGRICULTURAL TRADE BETWEEN UKRAINE AND THE EU

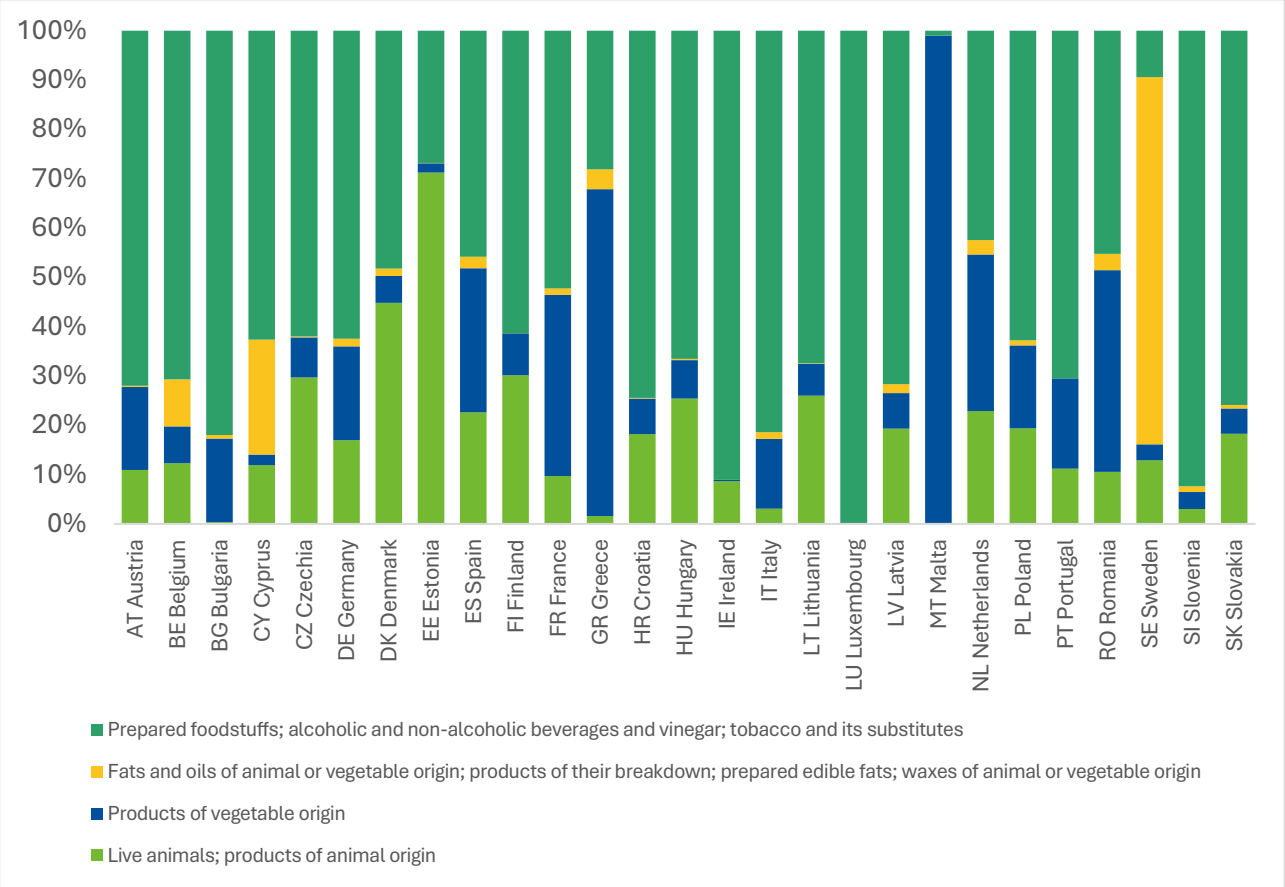
The structure of Ukraine's agricultural exports to the EU differs across EU member states. Crop products dominate Ukrainian exports (see Figure 9). On the other hand, higher value-added food products dominate Ukrainian imports (see Figure 10).

Figure 9. Structure of Ukrainian agricultural exports to the EU in 2023 (share of total value)



Source: CES calculations and visualisation based on data from the State Customs Service.

Figure 10. Structure of Ukrainian agricultural imports from the EU in 2023 (share of total value)



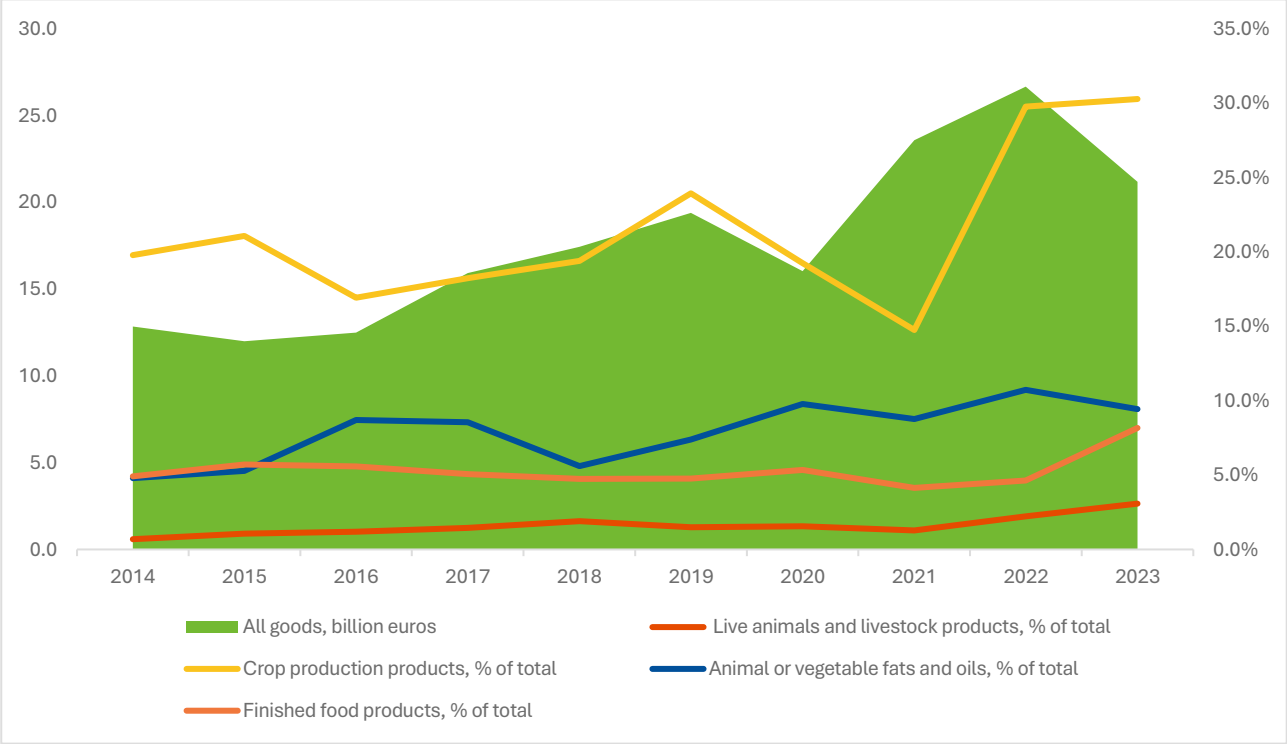
Source: CES calculations and visualisation based on data from the State Customs Service.

3.3. DYNAMICS OF UKRAINIAN TRADE SPECIALISATION IN AGRICULTURAL PRODUCTS

The Deep and Comprehensive Free Trade Agreement between Ukraine and the EU entered into force in early 2016, significantly impacting the volume of Ukrainian exports to the EU (see Figure 10). Before the full-scale invasion of russia, the maximum share of agricultural goods in Ukraine's exports to the EU was 37,6%; however, in 2023, it reached 51%.

According to the classical theory of international trade, international trade liberalisation leads to an increase in exports of goods in which a country has a comparative advantage (i.e., the ability to produce a unit of goods at a lower opportunity cost than its trading partners). However, in the case of Ukraine, the destruction of industrial capacities and increased domestic demand led to a decline in metallurgy exports and heavy industry. Thus, the level of trade specialisation in agricultural products we observe now is abnormally high and can be explained only partially by unilateral trade preferences from the EU.

Figure 10. Dynamics of total imports of Ukrainian goods to the EU and shares of agricultural products



Source: CES calculations and visualisation based on Eurostat Comext data (Extra-EU imports since 2010 by partner and other partner, by HS2-4-6 and CN8 (DS-059332)).

Nevertheless, a complete removal of administrative barriers to trade for Ukrainian goods in the EU might be considered an "internal market" simulation. Between 2021 and 2022, the volume of Ukrainian exports of livestock and crop products increased by 96,3% and 128,2%, respectively. At the same time, exports of finished food products (i.e., agricultural products with higher added value) increased by only 26,4%. Thus, the Ukrainian agricultural sector has the most significant trade advantage in the crop sector. However, as noted above, it would be misleading to extrapolate trade patterns during the full-scale war to general trade patterns between Ukraine and the EU.

4. POTENTIAL CONSEQUENCES OF UKRAINE'S PARTICIPATION IN THE EU CAP AND FACTORS DETERMING THEM

The EU CAP is aimed at developing agriculture and rural areas, ensuring a decent standard of living for farmers and stabilising agricultural markets. The CAP is financed from the EU budget; funds are mainly allocated from the following funds:

- The European Agricultural Guarantee Fund (EAGF, the so-called "first pillar"). This fund primarily finances direct payments to farmers and measures related to state intervention in the agricultural market.

- The European Agricultural Fund for Rural Development (EAFRD, the so-called "second pillar"). This fund focuses on rural development initiatives, including support for investment in agriculture, environmental sustainability and the diversification of the rural economy.

The main principles of the EU CAP policy are determined collectively by the Member States and remain unchanged for a certain period (for example, the current EU CAP strategy covers the period from 2023 to 2027, while the previous one was in force from 2014 to 2022 – the period was extended due to the pandemic). Each member state is obligated to create and implement a national rural and agricultural development strategy, which must align with the current EU CAP. Accordingly, each national government receives funds to implement the national plan. Thus, EU member states have a certain level of autonomy in implementing the EU CAP.

Participation in the EU CAP is voluntary. Farms are eligible for payments if they meet the conditions of the EU CAP (these conditions usually reflect the environmental and social objectives of the CAP and are updated periodically). Under the 2014-2022 CAP, farmers could count on different groups of payments[17]:

- **Decoupled payments,** i.e., payments intended to equalise and stabilise farmers' incomes. These payments are not directly linked to the output but only to the size of the enterprise. Farmers mainly use the Basic payment scheme, which considers historical payments or other factors to calculate current payments. The vast majority of countries that joined the EU in 2004 and later use the somewhat simplified Single area payment scheme. Livestock farmers can also benefit from the decoupled payments if they maintain their pastures in accordance with the environmental standards of the EU CAP. The decoupled payments also include additional assistance (e.g., support provided by the national government).
- **Crop subsidies**, including compensation/zonal payments, reserved premiums, and other support tied to output levels.
- **Livestock subsidies,** i.e., payments based on the volume of livestock;
- **Subsidies for investments in agriculture**;
- **Payments under the agricultural development programme**: this group includes environmental payments, payments to farms in the least favoured areas, and assistance in modernising and improving agricultural production standards.
- **Production subsidies,** i.e., subsidies for the purchase of raw materials, as well as subsidies for rent and labour;
- **Other subsidies** include assistance provided in extraordinary adverse circumstances.

In 2020, the number of farms in the EU reached 9,1 mln[18] , of which 6,7 mln received payments under the EU CAP[19]. Under the 2014-2022 programme, decoupled payments accounted for most EU member states' major share of all payments. France, Malta, Portugal, and Romania also received significant livestock subsidies – which, however, does not directly correlate with the relative size of the livestock sector in these countries

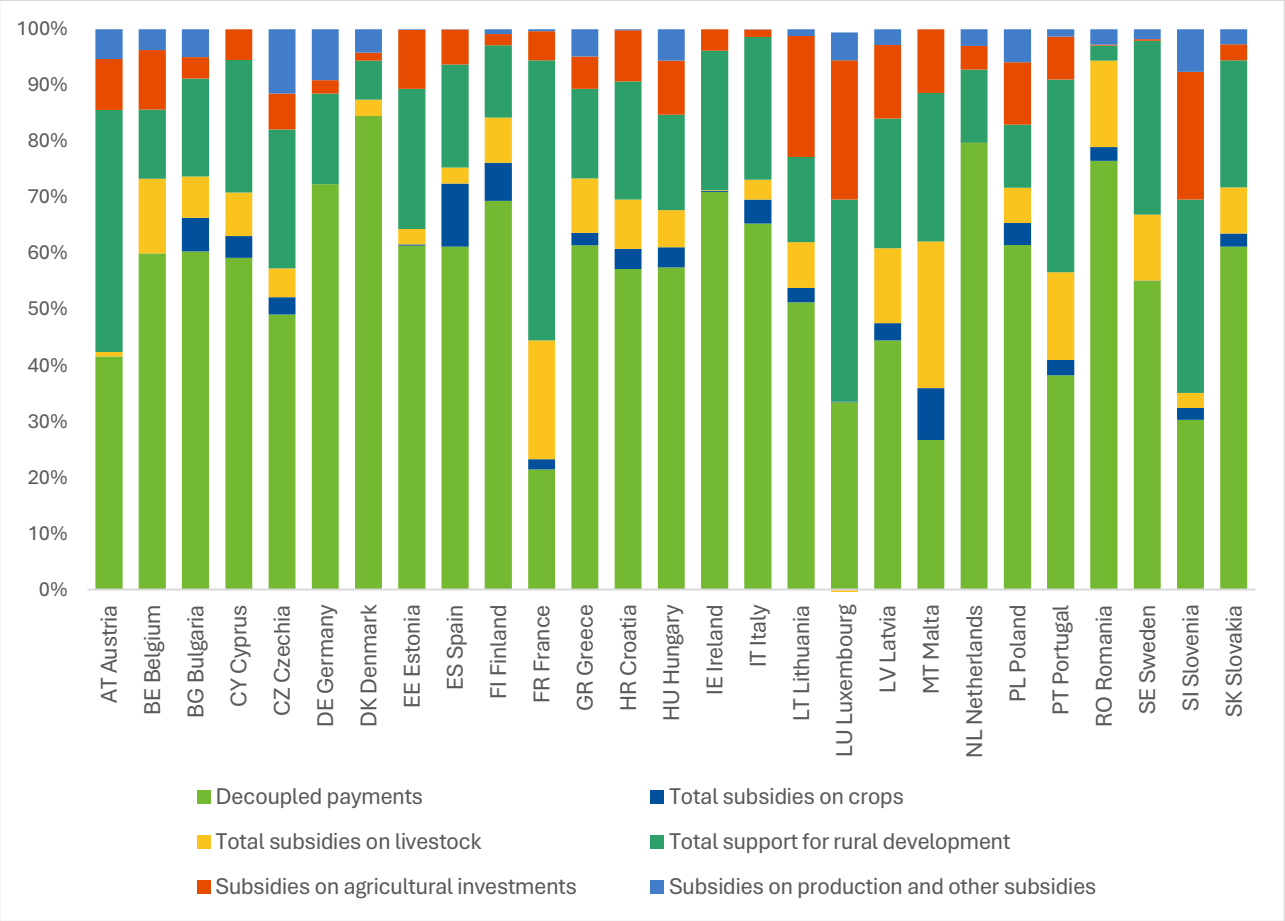
[17] See the glossary of the FADN PUBLIC DATABASE SO (europa.eu), the public database of the EU portal used for farm accounting.

[18] According to Eurostat.

[19] A greener and fairer CAP.

(see Figure 3). Crop subsidies accounted for a relatively small share of payments, while in most countries, farmers benefited from payments aimed at agricultural development.

Figure 11. Structure of payments to a representative farm in EU Member States under the EU CAP 2014-2022



Source: CES visualisation based on data from FADN PUBLIC DATABASE SO (europa.eu). Methodological note: For this graph, we analysed data collection for representative farms based on micro-data provided by individual farmers (a prerequisite for disbursements). Consequently, the statistics on the disbursement of Pillar I and Pillar II funds by individual Member States may differ.

4.1. CAP BUDGET

The EU CAP is funded from the EU budget[20], which, in turn, is replenished by each member state in proportion to its GDP and per capita income. Given Ukraine's large area of agricultural land and relatively low income, its future membership in the EU is often associated with a significant budgetary burden on other EU members. However, the amount of funds that a national government receives for the implementation of the EU CAP depends on many factors, including:

- historical payout volumes;
- area of agricultural land;

[20] According to the 2021-2027 Multiannual Budget Framework, 31% of all EU centralised expenditures are accounted for by the CAP - Understanding EU farm payments (europa.eu). It is also worth noting that direct payments and subsidies (and other interventions in agricultural markets) have always been financed from a separate EU budget, while rural development expenditure has in the past been co-financed from EU budgets, national budgets, and budgets of multi-annual national and government programmes. Starting from 2023, these payments will be unified (see more detailed description of the reforms in the next section).

- economic factors (less developed countries usually receive more funding);
- environmental and climate factors (countries with less favourable conditions can count on additional funding);
- quality of the national agricultural development strategy and its consistent implementation;
- strategic objectives of the current EU CAP policy;
- political negotiations (the European Parliament approves the multi-annual budgetary framework).

Thus, the additional fiscal burden associated with Ukraine's future EU membership will depend on multiple factors, most of which are uncertain at this point. The impact of the war also complicates the task. Since 2021, Ukraine has lost a significant part of its agricultural land, and the damage to the land is challenging to assess. In addition, numerous technical issues arise. For example, maintaining fallow land is one of the environmental requirements of the EU CAP, and farmers receive additional payments for this. Can mined fields be considered fallow land? Can the demining of agricultural land be financed from the European Rural Development Fund? Ukraine's experience is unique, and much will depend on the course of negotiations.

To understand the order of the figures, let us note that within the 2021-2027 multi-annual budget, the first pillar of the EU CAP was assigned for €291,1 bln, and the second - €95.5 bln[21] .

To our knowledge, the greatest estimated cost of Ukraine's participation in the EU CAP programme is €96,5 bln over seven years[22]. However, this figure should be taken cautiously, as it assumes that in 2030, Ukraine will join the EU and start receiving full payments on an equal footing with other member states. Such a scenario is unlikely, as most new member states went through a "transition period" with gradual payment increases; also, farmers need time to figure out how to participate in the CAP programme[23]. In addition, there is currently no framework for the EU's multi-annual budget for 2028-2034, which also raises certain doubts about the reliability of the estimates presented above.

Another study based on the experience of Poland and Romania argues that if Ukraine were to become an EU member in 2022, annual CAP payments would reach €10,4 bln per year[24] (this amount is slightly higher than the CAP payments for France in 2022). The Jacques Delors Centre's estimate is even more conservative – €7,6 bln per year[25]. To conclude, the difference between the minimum and maximum estimates of Ukraine's participation in the EU CAP is comparable to the total funding under the Ukraine Facility over four years.

To summarise, the amount of subsidies and payments for agricultural and rural development in Ukraine is difficult to predict, as political factors will play a significant role. The most heated public debate concerns direct payments. It is reasonable to expect that in the first years of membership, Ukrainian farmers will receive payments under a simplified Single area payment, similar to most countries that joined the EU in 2004 or later. In addition, we need to consider the structure of agriculture in Ukraine, which is dominated by crop

[21] CAP funds - European Commission (europa.eu).

[22] EU estimates Ukraine entitled to €186bn after accession

[23] For example, in Bulgaria, a relatively small proportion of farmers participated in the CAP programme - mainly due to administrative barriers - see Todorova, S. (2016). Bulgarian agriculture in the conditions of the EU Common Agricultural Policy. Journal of Central European Agriculture, 17(1), 107-118.

[24] The Potential Impact of Ukrainian Accession on the EU's Budget -and the Importance of Control Valves

[25] 20231213_LindnerNguyenHansum_Enlargement.pdf (delorscentre.eu)

production; hence, a sample of crop farms should be used to calculate the average payment per hectare in the EU. We also have to consider the effect of the recent reform that capped the amount of direct payments per farm. Thus, according to our rough estimates (since we do not dispose of detailed micro-data on the structure of Ukrainian agricultural enterprises), the maximum direct payments to Ukrainian farmers under the EU CAP will reach approximately €5 bln per year[26].

4.2. THE ECONOMIC IMPACT OF THE EU CAP ON MEMBER STATES

Over the past decades, the principles and mechanisms of the EU CAP have changed multiple times. In addition, the effects of CAP are largely determined by the country's agricultural production structure and other factors. Nevertheless, we can look at the experience of EU member states to understand how participation in the EU CAP will affect the Ukrainian economy and agricultural sector.

4.2.1. LEVEL OF MARKET CONCENTRATION

In the vast majority of new EU members, the introduction of the CAP was accompanied by an increase in the share of large farms[27]. Large enterprises can co-finance EU CAP investment programmes and thus benefit more from modernisation. In addition, agricultural market fluctuations (sometimes caused by public interventions in agricultural markets under the CAP) threaten large producers less. Finally, large producers have more administrative capacity to comply with EU CAP requirements and keep the necessary records. The CAP programme 2023-2027 aims to introduce more "fair" payment mechanisms[28], but evaluating the reform's outcomes is impossible at this point. The Ukrainian agricultural market is already highly concentrated. Therefore, to provide equal opportunities for relatively small producers, the relevant ministries must provide them with technical assistance (at least in the first years of membership).

4.2.2. AGRICULTURAL PRODUCTIVITY

Since 2005, the EU CAP has increasingly focused on direct payments to farmers and less on subsidies. In contrast to the latter, direct payments have less impact on free market mechanisms while stabilising farmers' incomes. The aforementioned reform has positively affected agricultural productivity in the EU; however, not all the EU countries

[26] Methodological note: to calculate the amount of payments, we used a sample of crop farms in the new EU member states (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia) that receive payments under the Single area payment scheme (a simplified payment scheme that does not take into account historical payments to calculate current payments). Based on data from FADN PUBLIC DATABASE SO (europa.eu), we calculated the total amount of decoupled payments and Single area payments per hectare of land. We used data on the area of agricultrural land in Ukraine for 2021. In addition, we have taken into account the restrictions on maximum payments per farm in the EU that came into force in 2023 (albeit voluntary, they were introduced in the vast majority of the "new" EU member states).

[27] Todorova, S. (2016). Bulgarian agriculture in the conditions of the EU Common Agricultural Policy. Journal of Central European Agriculture, 17(1), 107-118; Rogoźnicki, D., Kondracki, S., Baranowska, A. (2018). Common agricultural policy as a determinant of transformation in Polish agriculture. Proceedings of the 2018 International Scientific Conference 'Economic Sciences for Agribusiness and Rural Economy' No 1, Warsaw, 7-8 June 2018, pp. 168-174; Tocco, B., Davidova, S., & Bailey, A. (2013). The Impact of CAP Payments on the Exodus of Labour from Agriculture in Selected EU Member States. Factor Markets Working Paper No. 66, August 2013. https://doi.org/10.22004/AG.ECON.182816.

[28] CAP 2023-27 - European Commission (europa.eu)

associate higher levels of decoupled payments with higher productivity[29]. In addition, there is some evidence of a negative impact of crop subsidies and environmental payments on productivity. In contrast, other payments generally contribute to the harmonisation of productivity levels in Europe[30]. In the case of the "new" EU member states, agricultural productivity in Bulgaria[31] and Poland[32] has increased since the introduction of the CAP, partly due to the inflow of relatively young and educated labour into the agricultural sector. However, a study utilising a more extensive sample suggests that the effect of the EU CAP on agricultural productivity in the new member states was rather negative[33].

4.2.3. REGIONAL INEQUALITY

The EU CAP has indirectly impacted regional inequality, especially in the "new" member states. On the one hand, in Poland and Hungary, CAP payments have counteracted labour outflows from agriculture in agricultural regions[34]. In addition, the policy has contributed to economic growth in the agricultural areas, which typically have relatively low incomes[35]. On the other hand, as the EU CAP creates disproportionately favourable conditions for large farmers in relatively high-income regions, the policy may deepen regional inequalities[36].

4.3. CAP 2023-2027

The legal framework of the EU CAP for 2023-2027 is based on three regulations:

- Regulation 2021/2115[37] sets out the framework for the development and implementation of national strategies for the development of agriculture and rural areas in EU Member States;
- Regulation 2021/2116[38] sets out the framework for the financing, management and monitoring of funding under the EU CAP;

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[29] Rizov, M., Pokrivčák, J., & Ciaian, P. (2013). CAP Subsidies and the Productivity of EU Farms. Political Economy - Development: Domestic Development Strategies eJournal. https://doi.org/10.1111/1477-9552.12030.

[30] Quiroga, S., Suárez, C., Fernández-Haddad, Z., & Philippidis, G. (2017). Levelling the playing field for European Union agriculture: Does the Common Agricultural Policy impact homogeneously on farm productivity and efficiency? Land Use Policy, 68, 179-188. https://doi.org/10.1016/J.LANDUSEPOL.2017.07.057.

[31] Borisov, P., Kolaj, R., Yancheva, C., Yancheva, S. (2019). Influence of the common agricultural policy on Bulgarian agriculture. Bulgarian Journal of Agricultural Science, 25(3), 439-447.

[32] Rogoźnicki, D., Kondracki, S., Baranowska, A. (2018). Common agricultural policy as a determinant of transformation in Polish agriculture. Proceedings of the 2018 International Scientific Conference 'Economic Sciences for Agribusiness and Rural Economy' No 1, Warsaw, 7-8 June 2018, pp. 168-174.

[33] Duquenne, M., Tsiapa, M., & Tsiakos, V. (2019). Contribution of the Common Agricultural Policy to agricultural productivity of EU regions during 2004-2012. Review of Agricultural, Food and Environmental Studies, 100, 47 - 68. https://doi.org/10.1007/s41130-019-00093-9.

[34] Tocco, B., Davidova, S., & Bailey, A. (2013). The Impact of CAP Payments on the Exodus of Labour from Agriculture in Selected EU Member States. Factor Markets Working Paper No. 66, August 2013. https://doi.org/10.22004/AG.ECON.182816.

[35] Grodzicki, T., & Jankiewicz, M. (2022). The role of the common agricultural policy in contributing to jobs and growth in EU's rural areas and the impact of employment on shaping rural development: Evidence from the Baltic States. PLoS ONE, 17. https://doi.org/10.1371/journal.pone.0262673.

[36] Papadopoulos, A. (2015). The Impact of the CAP on Agriculture and Rural Areas of EU Member States. Agrarian South: Journal of Political Economy, 4, 22 - 53. https://doi.org/10.1177/2277976015574054.

[37] Regulation - 2021/2115 - EN - EUR-Lex (europa.eu)

[38] Regulation - 2021/2116 - EN - EUR-Lex (europa.eu)

- Regulation 2021/2117[39] sets out the fundamental principles for the functioning of the EU's internal agricultural market.

The change in legislation marked a shift in the approach to funding under the EU CAP. Under the 2014-2022 CAP, direct payments to farmers and interventions in agricultural markets (e.g. subsidies) were financed from the EU's central budget, while investments in agricultural and rural development were co-financed by the national government and the EU, thus being subject to limited control. Since 2023, both programmes have been combined in one strategic plan for all CAP expenditures, allowing for better agricultural policy coherence. In addition, the innovation prevents cross-financing of one member state from several EU funds.

The requirement to create and implement a national strategy for developing agriculture and rural areas was introduced to decentralise and increase expenditure efficiency under the EU CAP. The national strategy has to align with the basic principles and objectives of the EU CAP; however, Member States now have more flexibility in determining the direction of agricultural policy mechanisms. In addition, introducing quantitative indicators for each country contributes to more effective monitoring (in the past, the EU CAP was often criticised for its inefficiency, which probably stimulated the shift in focus towards specific targets and indicators).

Funding conditions have also changed. In particular, at least 25% of direct payments must be allocated to environmental initiatives like organic farming. At least 35% of the agricultural and rural development budget should be allocated to support biodiversity, environmental protection, and animal welfare, and 40% of the EU CAP budget should be spent on climate change[40].

In the past, the volume of agricultural products under the EU CAP was heavily regulated, significantly impacting several essential sectors in the "new" member states (vegetable production in Bulgaria, sugar production in Poland, etc.). The EU CAP 2023-2027 declares a more market-oriented approach, which should contribute to the competitive advantages of European producers at the international level. More attention is currently being paid to the welfare of small and medium-sized producers, who should also be encouraged by the new policy to form associations to increase their bargaining power to affect the market.

5. CONCLUSIONS AND RECOMMENDATIONS

Ukraine accounts for approximately a quarter of all European agricultural land. Accordingly, Ukraine is ahead of the EU in terms of the agricultural sector's contribution to GDP and the share of agricultural employment. Moreover, since the beginning of 2022, the share of agricultural goods in Ukraine's exports to the EU has increased significantly (currently, it is around 50%). The combination of these factors raises questions about the possibility of fully integrating the Ukrainian agricultural sector into the EU internal market without causing a significant shock to the European agricultural sector. Besides, the argument about the consequences of Ukraine's accession to the EU budget is also frequently raised during public debates. However, these barriers can be successfully levelled.

[39] Regulation - 2021/2117 - EN - EUR-Lex (europa.eu)

[40] Regulation - 2021/2115 - EN - EUR-Lex (europa.eu)

1. **Agriculture in Ukraine is indeed less diversified than in most EU member states**. In Ukraine, crop production is far more prevalent than livestock production. In addition, the lion's share of agricultural land is devoted to grains and industrial crops, an area quite comparable to the total land dedicated to these crops in the EU. However, Ukraine also creates a significant demand for finished food products produced in the EU – a complete liberalisation of trade between Ukraine and the EU is likely to increase it further. Furthermore, the leading importers of Ukrainian grain tend to have a strong advantage in livestock farming. Thus, Ukraine's relatively developed crop sector creates conditions for smart specialisation in EU member states.
2. **The Ukrainian crop production market is dominated by large agricultural holdings, which starkly contrasts the "family" farming model in the EU.** The high degree of market concentration contributes to the economies of scale, thus contributing to the cost competitiveness of Ukrainian agricultural goods. However, the argument about large producers is often mentioned in the context of direct payments – the sceptics claim that Ulraine's accession to the EU will imply that "oligarchs" are being supported at the cost of European family farms. However, the current CAP policy encourages limiting payments to large enterprises, so the direct financial benefit for most Ukrainian agricultural holdings will be pretty modest. We believe relatively small Ukrainian producers will benefit the most from participation in the EU CAP. However, they will require significant technical assistance during the first years of Ukraine's membership in the EU.
3. **Ukraine has large areas of agricultural land, but this will not bankrupt other EU member states.** As we noted above, there are limits on payments to one enterprise. Given the revenue of the largest Ukrainian holdings, participation in the EU CAP programme does not seem economically feasible for them. As for market intervention measures and expenditures for agricultural and rural development, their scope will largely depend on the negotiation process.
4. **Ukraine needs to decide on a model of agricultural development consistent with the regional development strategy.** In the current version of the EU CAP, the national agricultural development strategy is a key policy document that defines the amount of funding for agricultural programmes from the EU budget, the items of expenditure, and the monitoring and evaluation criteria. The EU CAP 2023-2027 declares specific objectives, but each member state has enough autonomy to determine the scope and policy mechanisms. For example, under the criterion of "fairer and more economically sustainable agricultural policy", Poland prefers to invest in the competitiveness of small farms[41], the Netherlands will spend additional money on technical assistance to farmers in developing business plans and digitalisation[42], and Romania will increase payments to small and medium-sized producers[43]. First of all, Ukraine needs to define a vision for the future of the agricultural sector – and this vision should also be consistent with the development strategies of agricultural regions.

[41] At a glance: Poland's CAP Strategic Plan (europa.eu)

[42] At a glance: The Netherlands' CAP Strategic Plan (europa.eu)

[43] At a glance: Romania's CAP Strategic Plan (europa.eu)