With support from

Federal Ministry of Agriculture, Food and Regional Identity

by decision of the German Bundestag

APD
German-Ukrainian Agricultural Policy Dialogue

Agro Policy Report APD/APB/11/2025

Analytical Report on the Agricultural Sector of Ukraine, the EU, and a Post-Enlargement EU: A SWOT-Based Assessment

Stephan von Cramon-Taubadel

Kyiv, December 2025

Implemented by

IAK AGRAR CONSULTING · COPA AFC · IAMO Leibniz-Institut für Agrarentwicklung in Transformationsökonomien

Operating partner

ЛОРАДА

GFA CONSULTING GROUP
General Agent BMLEH
Berlin Office

About the project "German-Ukrainian Agricultural Policy Dialogue" (APD)

The project "German-Ukrainian Agricultural Policy Dialogue (APD)" has been implemented with the support of the Federal Ministry of Agriculture, Food and Regional Identity (BMLEH) since 2006 and is currently being implemented until 2025 at its request through the executor of GFA Consulting Group LLC, as well as a consortium consisting of IAK Agrar Consulting, Leibniz Institute for Agricultural Development in Transition Economies and GOPA AFC GmbH.

The recipient of the project is the National Association of Agricultural Advisory Services of Ukraine "Dorada". The beneficiary of the project is the Ministry of Economy, Environment and Agriculture of Ukraine.

The project should support Ukraine in the areas of sustainable agriculture, efficient processing industry and international competitiveness in accordance with the principles of market and regulatory policies taking into account the development potential that arises under the Association Agreement between the EU and Ukraine. To meet this goal, the Project should provide information on German experience, as well as international European experience in development of agrarian and forestry policy framework, as well as on the organization of relevant agrarian and political institutions.

APD
German-Ukrainian
Agricultural Policy Dialogue

www.apd-ukraine.de

Authors:
Stephan von Cramon-Taubadel

Disclaimer

This study is published with the support of the German-Ukrainian Agricultural Policy Dialogue (APD). Any opinions and results, conclusions, suggestions or recommendations in the study are those of the author.

CONTENTS

1. Executive Summary

- Agriculture plays a pivotal role in Ukraine's economy, shaping both economic growth and rural communities. Its strengths lie in its unique resource base and competitiveness in producing staple agricultural commodities. Ukrainian agriculture suffered from volatile domestic agricultural policies and weak governance following independence; nevertheless, output and productivity growth in the decade leading up to Russia's invasion in 2022 was strong. Agriculture in Ukraine has been severely weakened by damage caused by Russia's attack, but has displayed impressive resilience. Post-war recovery and European integration against a background of growing global demand represent important opportunities, while the ongoing war, export dependence, a shrinking population and climate change pose threats.
- EU agriculture enjoys good production conditions, strong domestic demand for food, well-developed infrastructure and strong institutions. However, EU agriculture is dependent on imported fuel and fertiliser. Furthermore, in many regions of the EU farms are comparatively small, leading to inefficient production and low incomes. Agricultural policy making is complex and time consuming in the EU. This makes it difficult to take advantage of the opportunities presented by structural change, new technologies, and possibly enlargement. Geopolitical instability, climate change and policy gridlock due to farmer protests and blockades by EU members pose important threats to the further development of agriculture in the EU.
- Ukrainian accession would add roughly 25% to the EU's total agricultural area, and 31% to the EU's arable land. Hence, like earlier enlargements in 1986 and 2004-07 it would substantially increase the cost of the EU's Common Agricultural Policy (CAP). Budget costs are important, but policy decisions should be based on a comprehensive assessment of economic costs and benefits, not just budgets. It is striking that there are numerous published estimates of the effects of Ukraine's accession on the EU budget, but no comprehensive assessments of the benefits it would generate for agriculture and the economy as a whole in an enlarged EU.
- Ukraine is a reliable supplier of agricultural commodities; the EU has a highly competitive food processing sector. Against a background of growing global demand for food, Ukrainian agriculture can make a substantial contribution to the continued international competitiveness of the food processing industry in an enlarged EU, generating value-added and employment. Firms in the EU that produce and construct grain storage and port facilities, agricultural machinery, animal housing and manure treatment systems also stand to benefit from the rebuilding of Ukrainian agriculture.
- Policy makers should base their decisions on objective assessments of these complementarities between agriculture in the EU and Ukraine. Currently, debates on the question of Ukraine's membership in the EU are distorted by misinformation and fearmongering. Farm interests and politicians warn of 'catastrophic impacts' on agriculture in the EU and claim that imports of agricultural products from Ukraine are 'flooding' the EU and depressing prices, but there are no rigorous empirical studies to back up these allegations. The EU should use the analytical capacities at its disposal to generate objective evidence and counter false narratives.

2. Introduction

2.1. Background

In February 2013 the Verkhovna Rada (Ukrainian Parliament) overwhelmingly voted in favour of finalising an Association Agreement (AA) with the EU. President Viktor Yanukovych's refusal to sign this AA in November 2013 sparked a wave of protests known as the Euromaidan which culminated in the Revoliutsiia Hidnosti (Revolution of Dignity) or Maidan Revolution and Yanukovych's flight into Russian exile on February 22 2014. Less than one week later, Russia deployed unmarked soldiers to the Crimean Peninsula. In the ensuing months Russia annexed Crimea and fomented armed insurgencies in Donetsk, Kharkiv and Luhansk.

The EU-Ukraine AA was signed at an EU summit in Brussels in March 2014 (Government of Ukraine 2025). After it was ratified by the European Parliament and the Verkhovna Rada in September 2014, (then) new President Petro Poroshenko referred to the AA as a "first but most decisive step" towards EU membership (Deutsche Welle, 2014). The AA establishes a Deep and Comprehensive Free Trade Agreement (DFCTA) that provisionally entered into force on January 1, 2016. Following ratification by all signatories in the EU the DCFTA fully came into force on September 1, 2017.

Under the terms of the DCFTA, trade between the EU and Ukraine roughly doubled, as Ukraine's exports to the EU increased by 98% and EU exports to Ukraine increased by 106% between 2015 and 2021 (Akhvlediani, 2025). Agriculture contributed to these increases, with Ukrainian agricultural exports to (imports from) the EU growing by 86% (153%). Meanwhile, Russia continued its campaign of insurgency, sabotage and destabilisation in support of pro-Russian separatists in the Donbas region. On February 24 2022, three days after officially recognising the so-called Donetsk People's Republic and the Luhansk People's Republic, Russia started a full-scale invasion of Ukraine, triggering the deadliest conflict in Europe since World War II.

Four days after Russia's invasion began, Ukraine formally applied for EU membership. In an Opinion presented on June 17 2022, the European Commission recommended that Ukraine, together with Moldova and Georgia be granted candidate status for accession to the EU (European Commission, 2025a). Six days later on June 23 2022, Ukraine was granted candidate status by unanimous agreement of the heads of state all 27 EU members.

Even when they do not take place against a backdrop of war, negotiations on EU enlargement are a complex, protracted and sometimes arduous process. In the course of seven enlargements, the EU has added 22 members to the original six that signed the Treaty of Rome in 1957. In these previous enlargements, the agricultural chapter or "dossier" has always proven especially contentious. Agriculture undergoes substantial structural change in the course of economic development. While some farms grow to take advantage of the economies of scale that accompany ongoing technical change, other farms experience stagnating or even declining real incomes and pressure to cease operation. In this setting, farmers in the EU typically feel threatened by the prospect of enlargement and exposure to competitive pressure from farmers in new member states. Farmers in candidate countries are generally more optimistic about accession; they hope

to benefit from access to large, high-income markets for their produce, and from subsidies and other financial supports that are distributed under the EU's Common Agricultural Policy (CAP). However, farmers in candidate countries also worry about the costs and loss of competitiveness associated with adopting strict EU standards and restrictions on agricultural practices.

As accession negotiations between the EU and Ukraine progress, farm interests in the EU are voicing characteristic concerns. These concerns have been heightened by the effects of trade concessions, the so-called autonomous trade measures (ATMs) that the EU granted to Ukraine in response to Russia's aggression in early June 2022. With Ukraine's Black Sea routes blocked, the ATMs suspended all customs duties and quotas on agricultural and industrial goods under the EU-Ukraine DCFTA. The ATMs were extended twice, in 2023 and 2024 (Svitlychna, 2025). As a result, many of Ukraine's exports were redirected to the EU. Between 2021 and 2024, Ukrainian agricultural exports to the EU almost doubled from 7.3 to 14.1 bill US$. In the process, Ukraine's dependence on agricultural exports to the EU grew as the share of these exports in total Ukrainian exports increased from 11,5 to 36% (National Bank of Ukraine 2025).

Increased imports from Ukraine under the ATMs increased political and economic scrutiny within the EU. Farm interests, especially in EU member states such as Poland and Hungary that border on Ukraine, complained about market imbalances, low prices, and unfair competition (Dodd & Welsh, 2024). Several member states even introduced unilateral restrictions on imports of grain from Ukraine, in clear violation of EU law. Their pressure eventually led to the expiry of the ATMs in early June 2025. Following intensive negotiations, the EU and Ukraine reached an agreement in late June to revise their trade regime (European Commission, 2025b). As a result, since October 29 2025 agricultural trade between Ukraine and the EU is once again taking place under DCFTA provisions, although the EU has increased quotas for some products, and fully liberalised trade for several less-sensitive products (European Commission 2025c).

2.2. Objectives and scope of this study

The main objective of this study is to provide an overview of the implications of Ukraine's accession for agriculture in an enlarged EU. We begin with assessments of the strengths, weaknesses of the agricultural sectors in the EU and Ukraine, and the opportunities and threats that these sectors face. Based on these assessments we will analyse the implications of Ukraine's accession for agriculture in an enlarged EU, highlighting both the potential synergies that could be harnessed and the challenges that must be addressed on the road to Ukraine's accession.

This study is based on a comprehensive literature review and the analysis of production and trade statistics. The literature review synthesizes existing academic and policy studies on EU–Ukraine trade relations, agricultural markets, and integration processes, providing the necessary theoretical and contextual background. In parallel, descriptive statistical analysis of trade flows and structural indicators is employed to capture recent dynamics, highlight patterns, and identify key challenges.

The study is structured as follows. The next sections 3 and 4 are devoted to SWOT analyses of the agricultural sectors in Ukraine and in the EU, respectively. In section 5 we

consider the strategic implications of Ukraine's accession to the EU for agriculture by looking at its effects on the EU's global agri-food competitiveness, on the CAP and CAP spending, and on selected agricultural markets in the EU. In section 6 we derive several strategic recommendations for harnessing synergies and addressing challenges on the road to Ukraine's accession.

3. SWOT Analysis of Agriculture in Ukraine

Agriculture plays a pivotal role in Ukraine's economy, shaping both economic growth and rural communities. Its strengths lie in its unique resource base and competitiveness in producing staple agricultural commodities. Ukrainian agriculture suffered from volatile domestic agricultural policies and weak governance following independence; nevertheless, output and productivity growth in the decade leading up to Russia's invasion in 2022 was strong. Agriculture in Ukraine has been severely weakened by damage caused by Russia's attack, but has displayed impressive resilience. Post-war recovery and European integration against a background of growing global demand represent important opportunities, while the ongoing war, export dependence, a shrinking population and climate change pose threats. In the following we review these issues, which are summarised in Table 1.

Table 1: SWOT analysis of agriculture in Ukraine

STRENGTHS	WEAKNESSES
▪ Fertile black soils, flat topography, adequate rainfall and direct access to global shipping routes and markets. ▪ Proven export potential due to large productive capacity relative to population. ▪ Impressive recent agricultural growth based on productivity and competitiveness, not subsidies. ▪ War-time performance has revealed a high degree of resilience and adaptability. ▪ Mix of smallholders and large farms, providing both scale and diversity. ▪ Important role of agriculture in the national economy.	▪ Extensive war-related damage and contamination of agricultural land. ▪ Damaged and destroyed buildings and machinery, power outages and shortages of labour and other inputs. ▪ Farmers suffering war-related revenue losses due to lower production and output prices, higher production costs. ▪ Exports depend on Black Sea shipping, which has resumed but remains impaired and relatively expensive. ▪ Weak governance and institutions in agriculture. ▪ Low and unbalanced public investment in agriculture.
OPPORTUNITIES	**THREATS**
▪ Increasing global demand for food. ▪ Opportunity to build back better. ▪ Potential to further boost agricultural productivity with innovative technologies in fields such as robotics, remote sensing, digitalisation and artificial intelligence.	▪ Dependence on exports and exposure to global shocks and price volatility. ▪ Access to world markets via Black Sea remains vulnerable to blockades and other disturbances.

- Agricultural policy reset to:
  - Redirect public expenditure towards funding knowledge and innovation.
  - Reduce barriers to private investments in rebuilding.
  - Establish institutions required to implement the EU's CAP.
- EU and other international partners willing and able to support investments in institutional capacity.

- Mounting damages to agricultural land, some of which may have long-term effects on production capacity.
- Climate change and extreme weather events reduce production, increase volatility.
- Ongoing population decline and labour shortages.
- Accession process could be delayed or derailed if insufficient progress made on fundamental governance issues.

3.1. Strengths

With one-third of the world's most fertile black soils, flat topography, adequate rainfall and direct access to global shipping routes and markets, Ukraine is often referred to as a "breadbasket" (Countryman et al. 2024). Ukraine has more arable land (32.9 mill. ha) than France and Germany combined (28,7 mill. ha), but less than one-third of the population (44.3 vs. 149.8 million inhabitants in 2021) (FAO 2025a), giving it considerable export potential. As a result, Ukraine accounts for much higher shares of global trade in major grains such as wheat, maize, and barley than it does in global production. Ukraine also plays a dominant role on global markets for sunflower and rapeseed (Table 2).

Table 2: Ukraine's share in global production and trade of major crop products 2021/22

Product	Share of global production (%)	Share of global exports (%)	Rank in global exports
Wheat	4.3	9	5
Barley	6.8	17	3
Maize	3.5	12	4
Sunflower oil	30.6	46	1
Sunflower meal	27.5	54	1
Rapeseed	4.2	20	3

Source: USDA FAS (2022).

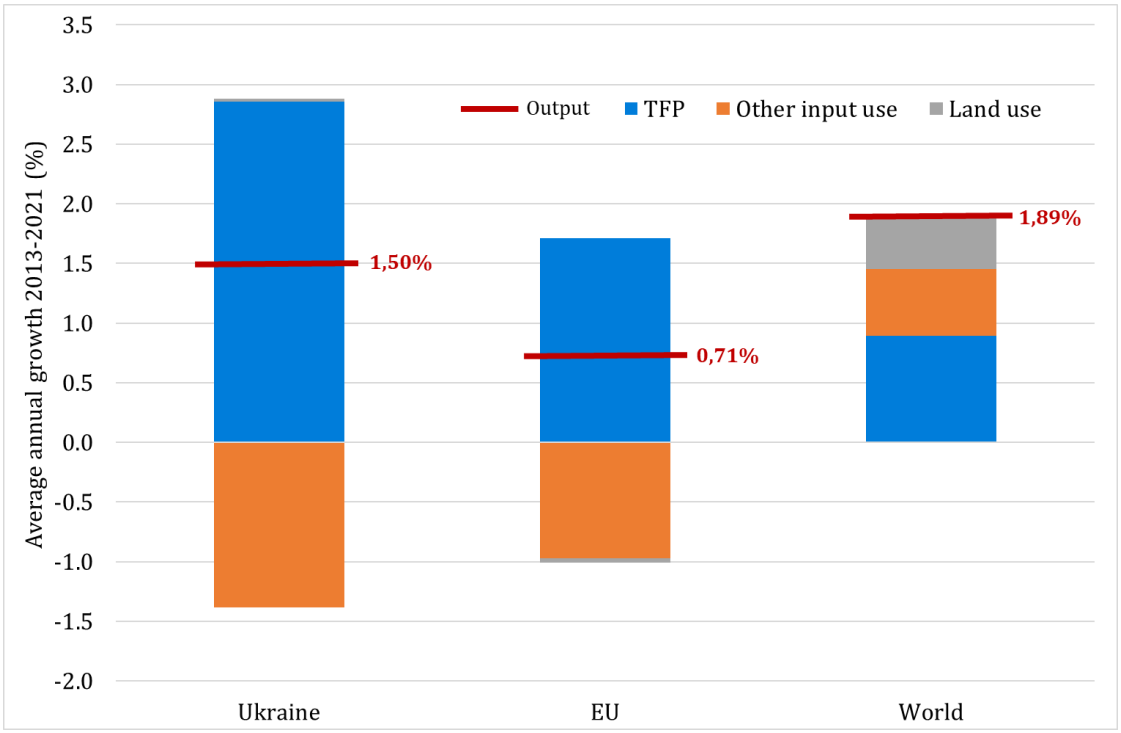
Agriculture has long been a cornerstone of the Ukrainian economy, contributing 10.9% of GDP, 14% of employment, and 41% of export value in 2021 (World Bank 2025). If related industries up- and downstream are also counted, agriculture's share of GDP was approximately 20% in 2021 (von Cramon-Taubadel and Nivievskyi 2023).

After contracting strongly in the 1990s, aggregate agricultural production in Ukraine stabilised in the early 2000s and began to grow strongly thereafter. Total agricultural output increased by 1.5% per year between 2013 and 2021. Figure 1 shows that this growth was entirely due to improvements in productivity, as land use remained constant, and the use of other inputs decreased. This growth was also achieved without substantial amounts of government support: according to the OECD's estimates (OECD 2025a), producer support as a share of farm receipts in Ukraine averaged below 1.5% between 2013 and 2021, and was negative in several years (OECD 2025a). This is a sign of strength, as it suggests that agricultural growth was based on competitiveness and not

distorted or artificially inflated by subsidies. Overall, Ukrainian agriculture was on a steep upward trajectory prior to 2022, driven by productivity improvements that allowed Ukrainian farmers to produce progressively more output with fewer inputs. Nevertheless, on average in 2020 and 2021, average per hectare yields in Ukraine lagged behind average yields in the EU by 30% for barley, 12% for maize, 26% for wheat and 37% for sugar beet; only for sunflower seed were Ukrainian yields on par with those in the EU (FAO 2025a). This suggests that past performance notwithstanding, there is still considerable potential for increased productivity and output growth in Ukrainian agriculture.

Since the outset of the war, Ukrainian agriculture has displayed remarkable resilience. Production has declined, but less than many experts anticipated. Using satellite and field-level data, Deininger et al. (2023) provide evidence of this resilience, showing that especially large farms have been able to limit production losses, presumably due to their geographical diversification and better access to foreign sources of capital and inputs compared with smaller or medium-sized operations. In response to damages, shortages and bottlenecks in trade infrastructure (see below), farmers, processors and traders responded by shifting production away from cereals to higher-value crops such as oilseeds and their by-products. Reflecting this resilience and adaptability, Ukraine's agricultural exports have remained relatively stable since 2022, and their share in total exports has increased from under 50% before the war to over 60% in 2023 and 2024 (Figure 2).

Figure 1: Sources of growth in agricultural output in Ukraine, the EU and the World (average annual growth from 2013 to 2021 in %)

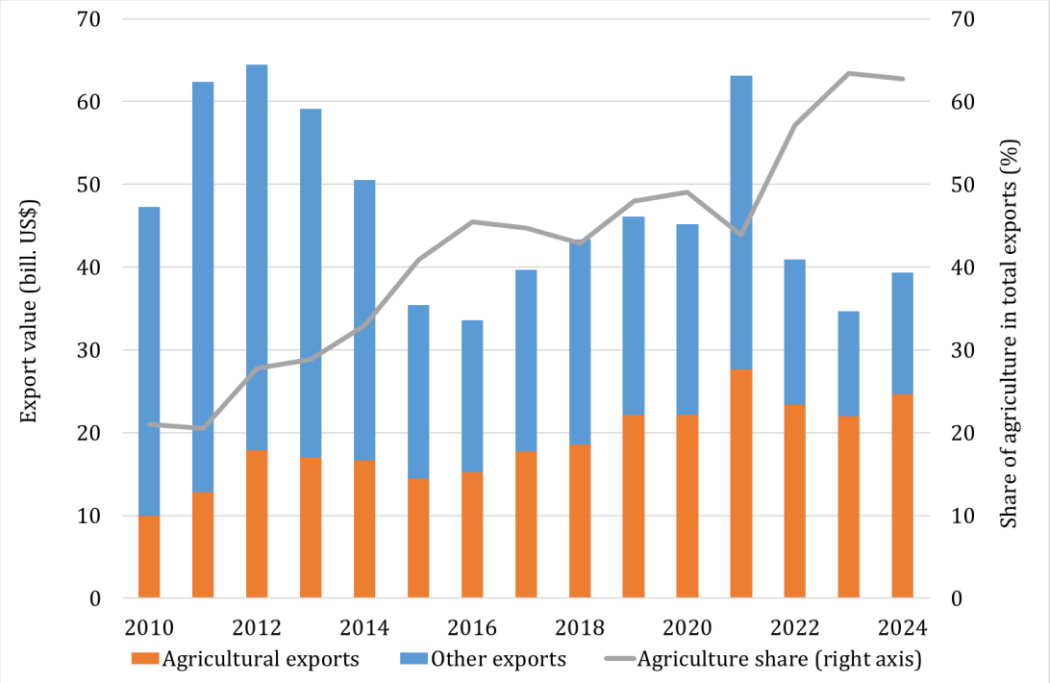


Source: USDA ERS (2025), own calculations.

As alluded to above, large farms make important contributions to the productivity and resilience of Ukrainian agriculture. Table 3 compares farm size distributions in the EU and Ukraine. The striking differences between these distributions are immediately apparent. Indeed, the granularity of the data published by statistical authorities in the EU and Ukraine differs considerably, with the EU providing greater detail on farms with fewer than 100

hectares, and Ukraine greater detail on farms with more. The preponderance of farms with 500 hectares and more in Ukraine is certainly a strength. Large farms are able to capture economies of scale and produce more efficiently, all other things being equal.

Figure 2: Ukrainian exports of agricultural and other goods (2010 to 2024)



Source: NBU (2025).

Table 3: Farm size distributions in the EU (2020) and Ukraine (2021)

Farm size (hectares)	EU						Ukraine					
	Farms			Utilised agricultural area			Farms*			Utilised agricultural area		
	Number ('000)	Share (%)	Cum. share	Hectares ('000)	Share (%)	Cum. share	Number ('000)	Share (%)	Cum. Share	Hectares ('000)	Share (%)	Cum. share
0-4.9	5786	63,8	63,8	9099	5,8	5,8	3,6	9,1	9,1	20	0,1	0,1
5-9.9	1122	12,4	76,2	7893	5,0	10,8						
10-19.9	789	8,7	84,9	11091	7,0	17,8	12,5	31,8	40,9	401	1,9	2,0
20-29.9	342	3,8	88,6	8354	5,3	23,1						
30-49.9	354	3,9	92,5	13696	8,7	31,8						
50-99.9	350	3,9	96,4	24643	15,7	47,5	5,2	13,1	54,1	373	1,8	3,8
100-500	328	3,6	100,0	82653	52,5	100,0	9,4	23,9	77,9	2290	11,0	14,8
500-1000							3,2	8,2	86,1	2314	11,1	25,9
1000-5000							4,8	12,3	98,5	10150	48,7	74,7
>5000							0,6	1,5	100,0	5274	25,3	100,0
Sum	9071			157428			39			20823		

*Notes: * Does not include rural households.*

Source: For the EU Eurostat (2022). For Ukraine Régnier and Catallo (2024).

In this context, the so-called agroholdings have attracted much attention. Data on the number and exact size of these agriholdings varies; according to Matuszak (2021) there were 22 entities with areas of over 50,000 hectares in 2021, and ten of these farmed over 100,000 hectares each. While there is no denying the importance of the agriholdings, also in debates about the implications of Ukrainian accession to the EU (see below), their importance should not be overstated. Several studies (Gagalyuk and Valentinov 2019; Walther and von Davier 2017) suggest that the agriholdings are not more efficient than smaller (large) farms, and that their emergence can rather be attributed to their organisational resilience and political influence under the turbulent conditions of transition. Excluding the agroholdings, Table 2 shows that 17,400 farms with 100 to 5,000 hectares in Ukraine account for roughly 71% of the utilised agricultural area. Together these farms account for over three-quarters of the country's grain production and represent the competitive core of Ukrainian agriculture.

3.2. Weaknesses

Russia's war of aggression has interrupted the steep trajectory of productivity growth that we referred to above. Kussul et al. (2025) find that the area of cultivated land in Ukraine shrunk by 10% nationwide over 2022-2024, and by 22% if only unoccupied areas are considered. The losses of cultivated are concentrated in conflict zones, where in many cases the land is not only temporarily uncultivated, but has been damaged, mined or chemically contaminated and may remain unsafe for production for years to come. In survey carried out by the FAO in late 2024, 18% of the crop producing enterprises in Ukraine, and 38% of the enterprises in conflict zones, reported fields affected by mines and unexploded ordnance (FAO, 2025b). According to GLOBSEC (2024), there are 15.6 mill. hectares of land in Ukraine that are potentially contaminated by mines, chemicals and other dangers. 470,000 hectares of agricultural land are targeted in Ukraine's Action Plan for Demining Agricultural Land (CSIS 2024).

The war has not only reduced the farmed area in Ukraine, it has also damaged and destroyed buildings and machinery and led to power outages and shortages of labour and other inputs. By late 2024, total war-related damages to agricultural assets in Ukraine were estimated to be 11.2 bill. US$ (World Bank, 2025). Agricultural machinery (58%) and storage facilities (17%) accounted for the largest shares of these damages. In addition to these asset losses, the World Bank (2025) estimates that agricultural producers in Ukraine suffered war-related revenue losses to due to lower production, lower output prices and higher production costs at 72.7 bill. US$. Asset and revenue losses have continued to mount since these estimates were generated, further weakening Ukraine's agricultural productive capacity and its ability to generate the financial flows required to invest and maintain the remaining capacity.

Finally, the war has also added to a growing shortage of labour in Ukrainian agriculture. Between 1992 and 2021, Ukraine's population had already declined by 21%, from roughly 52 to 41 million. By 2023 it had fallen further to 33.2 million, largely

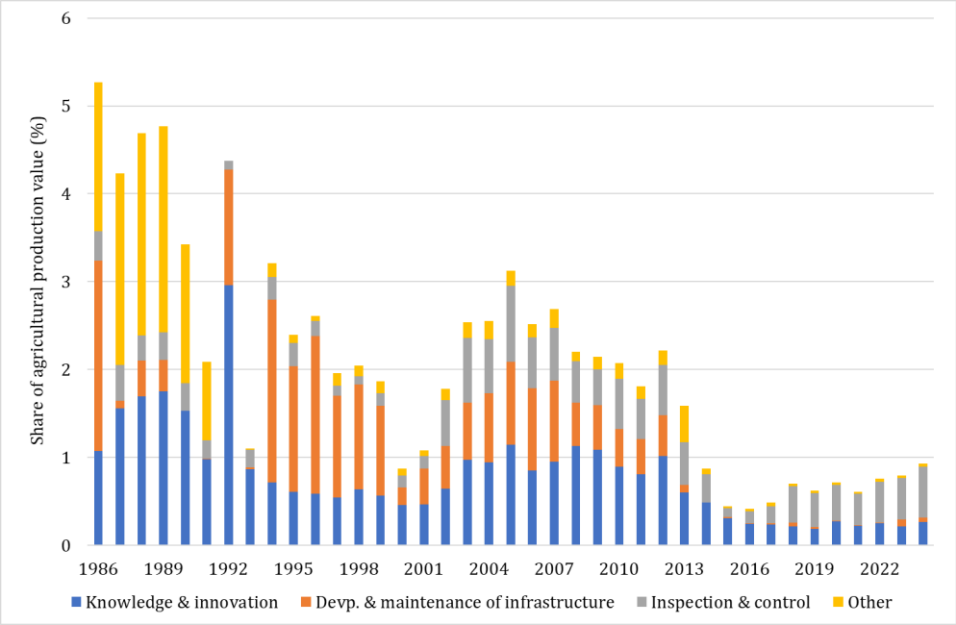
due to outflows of refugees (Darvas et al. 2024). Many remaining men and women have entered military service or are otherwise engaged in the country's defence effort. As a result, labour is scarce in agriculture and in other sectors.

Ukraine's reliance on the Black Sea became apparent when Russia blocked this maritime channel. Prior to the war, the ports of Odessa and Mykolaiv alone accounted for over 90% of Ukraine's grain export volumes (Hamulczuk et al., 2023). The costs of exporting by train or truck over land through the EU are much higher per ton than the costs of exporting by ship over the Black Sea. As a result, farm revenues in Ukraine fell sharply after the war began as the wedge between world market and farm-gate prices increased. For example, farm-gate prices for wheat and corn dropped by about 45% in early 2022. The Black Sea Grain Initiative brokered by the UN and Turkey provided some relief, accounting for 66, 58 and 75% of Ukraine's wheat, barley and corn exports from August 2022 to February 2023 (Hamulczuk et al., 2023). Since then, the Black Sea outlet for Ukrainian exports has been partially restored, with Ukraine's and Romania's Danube ports playing an important role. However, due to risk the cost of the Black Sea route remains relatively high, and farmers in Ukraine continue to suffer from depressed farm-gate prices as a result. The World Bank (2025) estimates that by the end of 2024, reductions in farm-gate prices had reduced farm revenues in Ukraine by 24.7 bill. US$.

Prior to Russia's war of aggression, the performance of Ukrainian agriculture was constrained by weak governance and institutions leading to volatile and often counterproductive agricultural policies. By 2008, 13 Ministers of Agriculture had served in Ukraine over the 17 years since independence (von Cramon-Taubadel, 2008), intermittently overlapping with Vice Prime Ministers responsible for agriculture. This lack of continuity combined with rent seeking as well as weak analytical and administrative capacities, resulted in a policy environment that limited growth and prolonged Ukrainian agriculture's emergence from the 'transition tunnel' of the 1990s and 2000s. A case in point are the grain export quotas that were introduced in Ukraine in 2006-08 and 2010-11. These quotas depressed domestic prices and thus taxed farmers (von Cramon-Taubadel and Raiser, 2006). Furthermore, there is anecdotal evidence that the distribution of quotas among trading companies was arbitrary and influenced by political connections. Land reform was also affected by this policy environment. A farmland sales market was not launched until 2021, and land governance remains fragmented, with no unified lease registry, a mix of digital and paper systems, and legal caps on short leases that fuel informality and dampen investment (Deininger et al., 2023).

We mentioned above that Ukraine has experienced impressive agricultural growth in agriculture without substantial levels of government support. While this can be interpreted as evidence of strength, the lack of government support also extends to public investment in agriculture, which is low and unbalanced in Ukraine. Figure 3 shows that public investments in agriculture in Ukraine as a share of the value of agricultural production has been volatile and, especially since the mid-2010s, low (compare with Figure 5 for the EU).

Figure 3: Public investments in agriculture in Ukraine as a share of the production value of agriculture (1986 to 2024)



Note: The category 'Other' includes "non specified expenditure up to 1991" (OECD 2025a), as well as costs of public stockholding and marketing and promotion. Source: OECD (2025a).

Furthermore, in recent years much of this investment has been in inspection and control systems rather than in knowledge and innovation (i.e., funding agricultural research, education and extension) or the development and maintenance of agricultural infrastructure.

3.3. Opportunities

Despite the interruption caused by Russia's war of aggression, Ukrainian agriculture continues to perform and has the potential to return to its former trajectory. The costs of repairing, restoring, rebuilding agriculture in Ukraine will be immense. The World Bank (2024) estimates a required investment volume of 55.5 bill. US$ between 2025 and 2035, and this figure has certainly grown as damage continues to accumulate. However, with global demand for food predicted to grow by 35-56% between 2010 and 2050 (van Dijk et al. 2021), the required investments will generate high returns.

Ukraine will have the opportunity to build back better. The impressive past agricultural productivity growth illustrated in Figure 1 can be summarised as 'catching up' as farmers in Ukraine adopted largely imported technologies embodied in machinery, varieties and agronomic practices. Rebuilding provides an opportunity for pushing the frontier with innovations developed in Ukraine based on emerging technologies in fields such as robotics, remote sensing, digitalisation and artificial intelligence. These are all areas in which Ukraine can draw on expertise that it has been forced to develop on the battlefield and possibly become an exporter of cutting-edge agricultural technology. These technologies can help to generate accurate land damage assessments and target demining and other restoration efforts (Kussul et al.

2025). They can also be implemented to increase the productivity and sustainability of farming practices (Finger, 2023).

Post-war rebuilding and pursuing accession to the EU will also provide an opportunity for an agricultural policy reset. Priority in public expenditures should be given to increasing the low levels of investment in knowledge and innovation mentioned above (Figure 3). Above all, future government spending in agriculture should focus on reducing barriers to the private investments that will be essential for rebuilding Ukrainian agriculture (World Bank, 2024). In addition to physical rebuilding, on the road to accession Ukraine will need to invest in the institutions required to implement the EU's CAP. These include: an authority to develop targeted support measures; a payment agency linked to farm registry and land parcel identification systems; and a control agency that monitors the implementation of support measures to ensure correct use of funds and that farms comply with environmental and animal welfare standards. Establishing and staffing these institutions costs money, but the EU and other development partners are already providing support. Furthermore, these institutions do not only exist to channel financial support to farmers. They also serve as conduits for knowledge transfer in both directions between farmers and policy makers. International cooperation, already tangible in the form of support from the EU, the World Bank, the FAO and other multi- and also bilateral donors, provides a foundation for scaling up institutional capacity in soil testing, sanitary and phytosanitary standards, land registries, food safety, and extension services (World Bank, 2024).

3.4. Threats

Given Ukraine's huge agricultural production potential relative to its comparatively small population, the country will continue to export large shares of its production and remain heavily reliant on exports. As a result, Ukraine will remain vulnerable to shocks on global agri-food markets. World market prices for agricultural products are volatile, and with them the export earnings that agricultural exporters such as Ukraine can generate. There will be good years, when world market prices are high and Ukraine's harvest above average, but also bad years, when world market prices are low and Ukraine's harvest below average. Price volatility on world markets can also trigger ill-advised policy responses, such as export quotas or taxes when world market price peak.

As a major net exporter, Ukraine is not only dependent on world markets, it is also dependent on access to these markets. The Black Sea connects directly to global shipping lanes and important nearby markets in the Middle East and Africa. As outlined above, Russia's war of aggression initially blocked this route. The situation has since improved partially. Nevertheless, geography is immutable. Ukraine shares the Black Sea with a hostile neighbour, and entry to and exit from this body of water is through a bottleneck – the Bosporus. Hence, Ukraine's access to world markets remains vulnerable to the threat of future blockades and other disturbances.

The longer the war continues, the greater the threat that long-term reductions in Ukraine's agricultural productive capacity could accumulate. Much of the land that has been damaged or mined in the course of the war can be restored relatively quickly given the necessary resources. But some types of pollution – for example the pollution caused when the destruction of the Kakhovka Dam in June 2023 released contaminants that had accumulated over decades in reservoir sediments (Shumilova et al., 2025) – could lead to the longer-term loss of some agricultural areas. The International Atomic Energy Agency has warned repeatedly of risks to nuclear safety, especially related to military activity in the vicinity of the Zaporizhzhya Nuclear Power Plant, which has been occupied by Russian troops since 2022 (IAEA, 2025). An accident or deliberate act of sabotage could contaminate large swaths of agricultural land and, by summoning up memories of the Chernobyl nuclear accident, negatively affect the perception of Ukrainian products in export markets.

Climate change poses a threat to agricultural production worldwide. There is evidence that climate change has already slowed productivity growth in agriculture (Ortiz-Bobea et al. 2021), Predicting the effects of climate change on production outcomes is difficult, especially for individual countries and regions, because climate models cannot predict with certainty, and because outcomes also depend on how farmer adapt. For Ukraine, Müller et al. (2016) conclude that increasing temperatures and changes in precipitation patterns (increases in northern and central regions, and slight decreases in the south) could lead to reductions in wheat yields, especially in southern regions. However, they do not account for adaptation in the form of changing agronomic practices, crop rotations, plant breeding and variety selection. Other studies suggest that the yields and ranges of some crops such as maize and soybeans could improve substantially in Ukraine, and that winter crops could benefit from reduced risk of freezing in the winter (World Bank 2024). On the other hand, increased temperatures and precipitation could lead to more pest and disease pressure. Moreover, there is wide agreement that climate change will lead to more extreme weather events such as very hot and dry periods that can have a catastrophic effect on crop yields (Krakovska and Kryshtop, 2024). Regardless of how hard Ukraine itself feels the effects of these phenomena, due to its dependence on exports it will feel the increased volatility of production and prices on world markets stemming from the effects of climate change in other countries.

Continued decline in Ukraine's population threatens to exacerbate labour shortages in the future. Some refugees who have left the country since the war began will return when it ends, but it is unclear how many. Furthermore, experience in Central and Eastern European countries that joined the EU in 2004 and 2007 suggests that accession to the EU and the pull of higher incomes would likely lead to more, and not less emigration. Darvas et al. (2024) present scenarios in which Ukraine's population would fall below 30 million and even below 25 million by 2050. Grieveson et al. (2023) warn of "a monumental demographic shock". Under those conditions, it would become increasingly difficult for agriculture in Ukraine to attract labour.

We listed problems with governance and institutions in agriculture as a weakness above. However, the problem of weak governance in Ukraine extends beyond agriculture. Ukraine's overall governance performance lags behind that of most other accession candidates, and far behind that of the current EU members (EBRD, 2023). Fundamental issues raised in this regard include the rule of law, the independence of the judiciary, combatting corruption and curbing the influence of oligarchs (Darvas et al. 2024, European Commission 2025h). Addressing such issues at a time of war is challenging. Nevertheless, the EU has introduced the concept of 'reversibility' in its new 'revised enlargement methodology' (European Commission 2024b). Thus, failure to make sufficient progress on overarching governance issues could delay or even derail the entire accession process. At the very least it would provide those who oppose Ukraine's accession with arguments, and weaken the credibility of those in the EU who support Ukraine's candidacy.

4. SWOT Analysis of Agriculture in Ukraine

It is difficult to carry out a SWOT analysis for such a large and heterogeneous bloc as the EU. Strengths and weaknesses are not distributed evenly between Lisbon and Helsinki. The same holds for opportunities and threats; for example, agriculture in some regions of the EU might benefit from climate change while in many others it is severely threatened. In general, EU agriculture has many strengths, with good production conditions, strong domestic demand for food, well-developed infrastructure and strong institutions. However, EU agriculture is dependent on imported fuel and fertiliser. Furthermore, in many regions of the EU farms are comparatively small, leading to inefficient production and low incomes. Agricultural policy making is complex and time consuming in the EU. This makes it difficult to take advantage of the opportunities presented by structural change, new technologies, and possibly enlargement. Geopolitical instability, climate change and policy gridlock due to farmer protests and blockades by certain EU members pose important threats to the further development of agriculture in the EU. In the following we review these issues, which are summarised in Table 4.

Table 4: SWOT matrix of agriculture in the EU

STRENGTHS	WEAKNESSES

▪ Good soils and climatic conditions for agricultural production.
▪ Resilience due to size and heterogeneity of production conditions.
▪ Consumers willing and able to pay for quality food products.
▪ Competitive food processing industry
▪ Net exporter agri-food products and especially products with high value added.
▪ Strong infrastructure and transport networks with considerable logistical redundancy.
	▪ Farm sizes in many regions too small to capture economies of scale.
	▪ Dependence on imports for key agricultural inputs such as fuel and fertiliser.
	▪ CAP in need of reform, but the policy making process is complex and time-consuming due to
	  ○ Institutional complexity.
	  ○ Heterogeneity of member state interests.
	▪ Ageing farm and rural populations in many regions, shortage of labour

▪ Established, well-funded agricultural policy and institutions for policy delivery.	
OPPORTUNITIES	**THREATS**
▪ Structural change in agriculture as 'baby boom' farmers retire provides opportunity for productivity growth ▪ CAP reform could free/redirect substantial resources for more productive use in agriculture. ▪ Enlargement provides opportunity to rethink the CAP and to take advantage of complementarities between agriculture in the EU and Ukraine. ▪ Harness new technologies to increase productivity and sustainability of agriculture.	▪ Geopolitical instability threatens rules-based trade and the stability of global agri-food markets. ▪ Climate change and extreme weather events reduce production, increase volatility. ▪ Policy gridlock, necessary decisions and reforms blocked by a small number of member states. ▪ Farmer protests block reforms and enlargement. ▪ Disinformation fostered by external agents aiming to undermine EU unity. ▪ Widespread scepticism regarding the use of new technologies in agriculture.

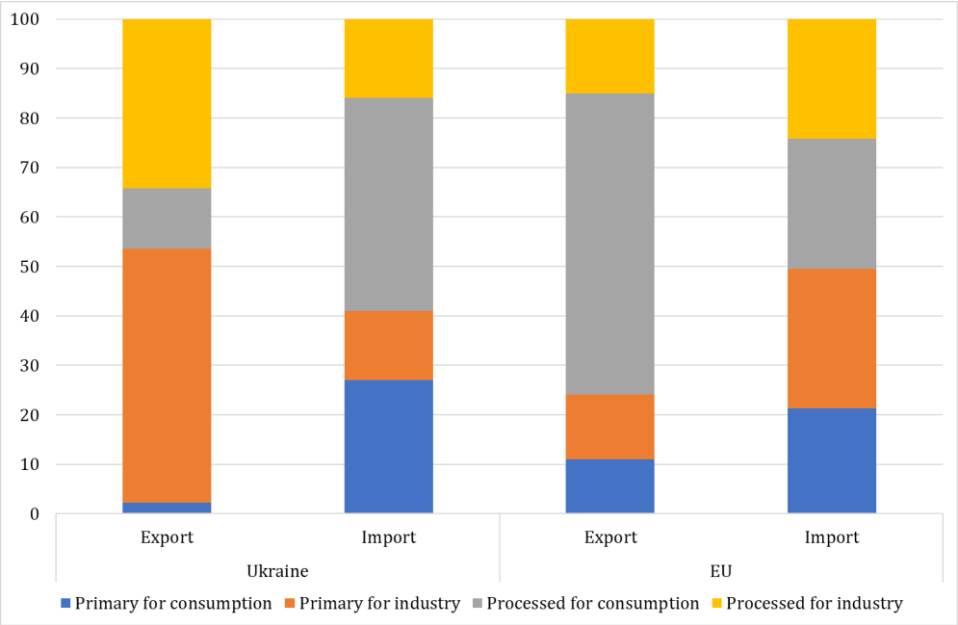
4.1. Strengths

The EU boasts overall good soil and climate conditions for the production of a wide variety of temperate crops and livestock species. Conditions vary widely, leading to different competitive advantages and regional specialisation. The large size and heterogeneity of the EU provide a measure of resilience; drought and other difficulties arise somewhere within the EU just about every year, but this is just as often compensated with above average conditions and yields in other regions. Good production conditions combined with a large capital stock in agriculture generate high and relatively stable yields. The EU ranks 3rd in the world in the production of wheat, 1st in barley and 3rd in maize. It also ranks 2nd in rapeseed, 1st in sugarbeet and 2nd in pig meat production (USDA 2022).

Unlike Ukraine, however, large production volumes in the EU do not always translate into exports. The EU's large population and high incomes support strong domestic demand, especially for livestock products, which are produced using grains and oilseeds as feedstuffs. Hence, while the EU does export wheat and barley, it imports maize, rapeseed and other oilseeds such as soybeans. High income levels also lead to high demand for and imports of tropical fruits and products such as coffee and cocoa that do not grow in the EU. Nevertheless, the EU has been the world's largest exporter of agricultural products since 2013. Since 2021, annual export volumes have topped 225 bill. US$ (OECD 2025a). The annual value of the EU's agricultural imports has been roughly 160-185 bill. US$ in recent years, Hence, like Ukraine the EU runs a sizeable agricultural trade surplus. Figure 4 shows that the EU agricultural exports are largely composed of processed food products, while its agricultural imports contain a larger share of products for further processing (such as the above-mentioned feedstuffs). This implies that the EU derives its strength as an agri-food exporter not only from its productive farm sector but also from a highly competitive food industry.

This contrasts with Ukraine, which exports larger shares of primary products and imports a larger share of processed products.

Figure 4: The composition of the EU's and Ukraine's agricultural exports and imports (2023)

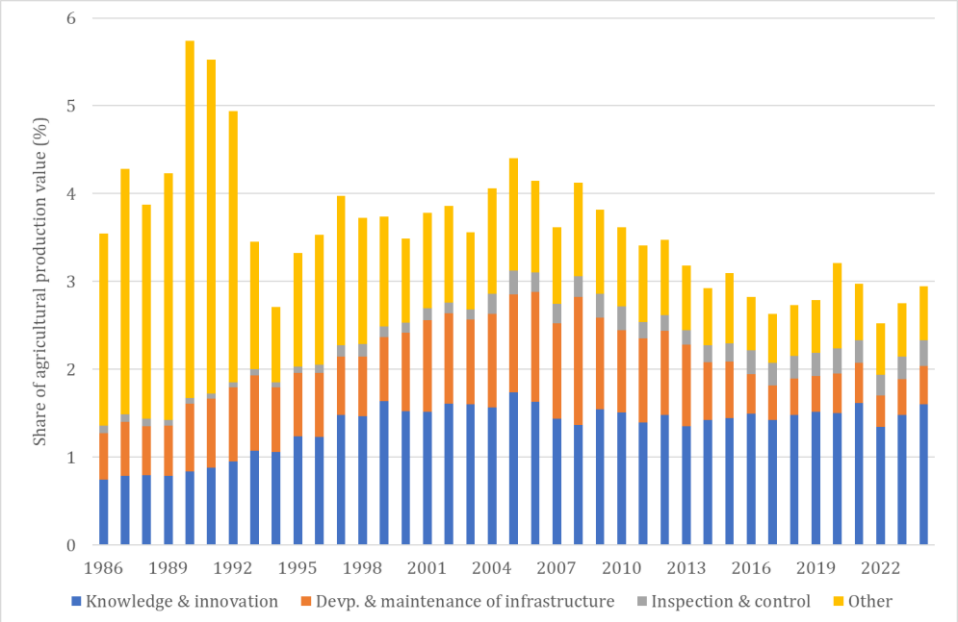


Source: OECD (2025a).

Agriculture in the EU also benefits from good infrastructure in the form of road, rail and waterway networks. The EU has a long coastline and numerous ports which provide a measure of logistical flexibility and redundancy.

The EU's CAP can be criticised (see below), but it is well-funded and has been in operation for many decades, providing farmers in the EU with a comparatively stable policy environment. The CAP is based on an established network of national, regional and local institutions that implement policy measures such as per hectare support payments, monitor compliance with standards, ensure the traceability of products, collect harmonised statistics on production and markets, and provide extension services. Figure 5 shows that public investment in agriculture in the EU as a share of the value of agricultural production has been higher and less volatile than in Ukraine (compare with Figure 3), and that higher shares of this investment have been dedicated to knowledge and innovation and the development and maintenance of infrastructure.

Figure 5: Public investments in agriculture in the EU as a share of the production value of agriculture (1986 to 2024)



Note: The category 'Other' includes costs of public stockholding and marketing and promotion.
Source: OECD (2025a).

4.2. Weaknesses

As shown above (Table 3), small farms account for a much higher share of farm numbers and farmed land in the EU than in Ukraine. Many farms in the EU are too small to capture economies of scale in production. This leads to income disparities and political pressure for support policies. Production spread over large numbers of small farms also creates challenges for food processors, who prefer to contract with fewer large farms and process larger, homogeneous lots of raw products. In addition, there are economies of scale in the administration of agricultural policy measures; for example, whether a payment authority has to process separate applications from 1000 ten-hectare farms, or from ten 1000-hectare farms. Some will argue that small farms are not a weakness but an essential component of economic activity, employment and cultural identity in vibrant rural communities. Regardless of one's position on the merits of smaller farms, the trend to fewer and larger farms over time is persistent throughout the EU. Agricultural policy makers in the EU are confronted with competing objectives; to encourage structural change as a means of increasing the productivity and efficiency of agriculture, or to provide support to maintain small farms. Attempts to reconcile these objectives have often led to contradictory and inefficient agricultural policies in the EU.

The CAP was listed as a strength of EU agriculture above because it has provided a relatively stable policy environment and support to the sector. However, few groups in the EU are satisfied with the operation and outcomes of the CAP. Farmers typically complain that they do not receive sufficient support, and that applying for this support and proving and maintaining eligibility burdens them with increasingly onerous bureaucracy. Environmental groups argue that the CAP does not provide sufficient

incentives for sustainable production practices. Economists point out that CAP support is poorly targeted. The largest share of support is provided to farmers in the form of per hectare payments, which means that large farms receive larger amounts than smaller farms. In addition, since per hectare payments tend to be capitalised into land prices, the ultimate beneficiaries of much CAP support are landowners, not necessarily farmers. Finally, non-agricultural policymakers complain that the CAP absorbs an excessive share of the total EU budget (currently roughly 25%), when the EU needs to reallocate funds to more pressing priorities such as defence, research and infrastructure.

Although there may be agreement that the CAP should be reformed, agreeing on reform has become increasingly difficult over time. The EU's legislative process is complex and time consuming as both the EU Parliament and the member states must be consulted and ultimately approve any reform. Different policy areas – agriculture, but also environment and health – must be consulted and integrated, and often appear to be working at cross-purposes. The individual member states have often divergent agricultural interests depending on the structure and competitiveness of their farm sectors, the nature of the proposed reforms, and whether they are net contributors to or net recipients of EU spending. Securing the required majorities among the member states and in the European Parliament therefore requires lengthy negotiations and a delicate balancing of interests. The resulting process is therefore slow and biased towards, at best, incremental reform.

Overall, the EU's trade in agricultural products is well diversified as the EU trades with a large number of destination and source countries (European Commission, 2023a). Nevertheless, the EU is dependent on key partners on some export markets (e.g., pig meat to China) and import markets (e.g., oilseeds from Brazil). EU agriculture is also dependent on imports for critical inputs such as fuel and fertilises.

Agriculture in many parts of the EU is facing major demographic challenges and a growing shortage of qualified farm labour. In 2020, only 11.9% of the farm managers in the EU were aged 40 and below (European Commission, 2022). This is largely a result of broader demographic structures and the 'baby boom' generation of current farm managers aged 60 and above who are now approaching retirement.

4.3. Opportunities

The age structure of farming in many parts of the EU is a current weakness of agriculture, but also represents an opportunity. As 'baby boom' farmers retire and their children and other potential successors decide not to continue farming, some farms will cease operation, allowing others to grow. This structural change in agriculture towards larger, more efficient and commercially viable farms presents an opportunity to increase the productivity of EU agriculture. In many parts of the EU, agriculture is dominated by family farms that have survived and evolved over multiple generations and often centuries. The decision to cease the operation of such a farm is rarely easy to take, but it is generally least difficult when generational change approaches and the

question of farm succession arises, which is currently the case on many farms in the EU.

Another opportunity for agriculture in the EU lies in the potential of technologies such as digitalisation, robotics, remote sensing and CRISPR gene editing. Harnessing these technologies can lead to increased productivity, allowing agriculture to produce more output with less input, and to increase the sustainability of agricultural production by using smaller amounts of inputs (such as land or pesticides) and producing fewer 'bad' outputs (such as nitrate pollution or biodiversity loss). As illustrated above (Figure 1), increases in agricultural output in both the EU and Ukraine have been entirely due to increases in productivity over the last decade, as agricultural output has grown while input use has fallen. Farm succession often presents a window of opportunity for the adoption of new technologies, as a young farmer's decision to take over a farm operation is often combined with decisions on modernisation and expansion. Furthermore, many new technologies for example in digitalisation require considerable up-front investment and are easier to implement on larger farms.

Reform of the CAP also represents an opportunity for improving the productivity and sustainability of agriculture in the EU. The bulk of the CAP budget (32.8 of 55.6 bill. Euro in 2024) is spent on per-hectare payments. As outlined above, the distribution of these payments (primarily to larger farms, and ultimately passed on to landowners who are not necessarily farmers) is questionable. This spending could be put to other, more productive use in agricultural research and education, in the provision of public services and infrastructure, and in targeted income support based on means testing. Since leaving the EU, the United Kingdom has replaced direct payments with other schemes, and recent *Strategic Dialogue on the Future of EU Agriculture* involving stakeholders from the agricultural and food sectors, rural communities, academia and civil society (Strohschneider 2024) recommends that the current EU direct payments be phased out over the course of the upcoming 2028-2034 period.

Finally, enlargement itself represents an important opportunity for agriculture in the EU. Since Ukraine's accession in particular would have important implications for the CAP and especially CAP spending (see section 5 below), it provides an opportunity to rethink CAP instruments, their objectives and their effectiveness. Previous EU enlargements have been facilitated by adjusting the CAP to reduce the costs of admitting new members (Matthews 2024), and the prospect of extending per hectare payments to such a large area as Ukraine could accelerate the fundamental rethinking of the role of these payments that has already begun, for example in the above-mentioned *Strategic Dialogue*.

On a more practical level, enlargement also represents an opportunity to harness complementarities between the EU and Ukraine, to increase the productivity and sustainability of agriculture in both. We discuss this opportunity in section 5 below.

4.4. Threats

Geopolitical instability and an increasing disregard for multilateral institutions in countries including Russia and the US threatens the rules-based trade and the stability of global agri-food markets. This represents an important threat for agriculture in the EU, which depends heavily on exports and imports.

Climate change is also an important threat to agriculture in the EU. The effects of climate change on agriculture are complex and impossible to predict with certainty, but it is clear that they will not be spread evenly across the EU (Lüttringhaus et al. 2019, Hristov et al. 2020). Mean temperatures will increase to varying degrees everywhere in the EU but precipitation is expected to increase in some regions and fall in others. There are indications that Mediterranean countries such as Greece, Italy and Spain will experience especially strong reductions in precipitation that threaten to substantially reduce crop yields. Improvements in other regions of the EU might compensate for these reductions, providing the EU as a whole with a degree of resilience. However, differences across the EU in agriculture's vulnerability to climate change could lead to diverging demands on the CAP and undermine European solidarity.

Technological innovations in agriculture could contribute to efforts to mitigate and adapt to climate change in the future. In addition, as mentioned above, new technologies can help boost productivity and sustainability in agriculture. Agriculture in the EU is capital intensive and makes use of many modern technologies, but lags behind much of the world in the use of new genetic technologies such as CRISPR gene editing. There is widespread scepticism in the EU regarding these technologies (Woźniak et al. 2021), and as a result they are subject to strict regulation that has largely precluded their use. There is broad consensus in the scientific community, that these are promising technologies and that existing regulations are outdated and counterproductive. The European Commission has proposed new, less restrictive regulations that are currently being debated, but with uncertain outcome (European Commission 2023b). If the regulation of new genetic technologies remains restrictive, agriculture in the EU could suffer from loss of competitiveness in the future.

In our discussion of weaknesses and opportunities above we have argued the case for reforming the CAP. However, there are indications that CAP reform may be especially difficult to achieve in the coming years. As pointed out above, CAP reform is difficult enough due to the complexity and time-consuming nature of EU decision making, and the heterogeneity of national interests within the EU. Farmer protests that began in Germany December 2023 and were joined in the coming months by similar actions in Belgium, France, the Netherlands and Poland, have made policy makers increasingly wary of moves that might run counter to agricultural interests. The protests erupted for different reasons in different member states, but a common theme along with calls for higher prices was rejection of additional environmental regulations in agriculture. In 2020, the European Commission had proposed such regulation as part of its Farm to Fork Strategy (European Commission, 2020). The proposals

triggered extensive and protracted debate and negotiation but led to few concrete changes, and were ultimately rolled back or strongly diluted in the course of 2024, also in response to farmer protests (Aubert 2024, Matthews 2025c). Since then, farmers have repeatedly threatened to protest in opposition to reform proposals and trade agreements (e.g., Kottász 2025). In many member states there are political parties whose electoral success hinges on mobilising voters in farming and in rural areas, and who support farmer protests and opposition to reform. Together these factors raise the risk of policy gridlock that could make it difficult to agree on necessary reforms, and possibly also EU enlargement, in the coming years.

5. Implications of Ukraine's Accession to the EU

Since Ukraine was granted candidate status by the EU in June 2022, many studies have been published on the challenges and implications of Ukrainian accession. Accurate prediction of the effects of Ukrainian accession is highly speculative because many crucial factors are uncertain. These factors include the outcome of the war and the timing and conditions of accession, but also how the EU and its policies evolve leading up to accession. In the following we review several key implications of Ukraine's accession to the EU.

5.1. Implications for the EU's Agri-Food Competitiveness

The EU currently ranks first among global exporters of food (followed by the US, Brazil, China and Canada), and third among the global importers of food (after China and the US, and ahead of the United Kingdom and Canada). Since Ukraine is also a net exporter of agricultural goods, the EU and Ukraine together would have a larger positive agricultural trade balance vis-à-vis third countries than the EU-27 currently does. Based on 2021 data, the addition of Ukraine would increase EU's agricultural trade surplus by roughly 25%, from 67.4 to 84.3 bill. Euro (Table 5).

Table 5: Agricultural trade – EU and Ukraine individually and combined (2021, bill. Euro)

Item	EU-27	Ukraine	Combined
a) Total exports	197.5	23.4	220.9
b) Between EU & Ukraine	2.9	6.1	9.1
c) Exports to third countries = a) – b)	194.6	17.3	211.9
d) Total imports	130.1	6.5	136.6
e) Between EU & Ukraine	6.1	2.9	9.1
f) Imports from third countries = d) – e)	124.0	3.6	127.6
g) Trade balance = a) – d)	67.4	16.9	84.3
h) Balance with third countries = c) – f)	70.6	13.7	84.3

Source: Own calculations with National Bank of Ukraine (2025) and European Commission (2025d).

Note: In an enlarged EU, agricultural trade between EU-27 and Ukraine would be considered intra-EU trade. This would lead to a shift

When Ukrainian agriculture returns to its pre-war trajectory of productivity and output growth, its contribution the trade surplus of an enlarged EU will grow as well.

Moreover, as discussed above (Figure 4), agricultural trade patterns in the EU and Ukraine are complementary. The EU exports mainly processed agri-food products while Ukraine exports mainly primary products such as grains and oilseeds, and products such as vegetable oils and meals (from rapeseed and sunflower seed) and sugar that are destined for further processing (Figure 4). As an EU member, Ukraine would be a reliable source of agricultural inputs for processing into higher-value exports. In the medium term, this further processing will increasingly take place in Ukraine itself, but often based on investments and partnerships that will also benefit the rest of the EU.

Large and growing agricultural trade surpluses are not an objective *per se*. However, the increased importance of the EU in agricultural trade due to Ukraine's accession would enhance the EU's leverage in negotiating trade agreements and in pursuing its agenda of linking trade to environmental and animal welfare. More generally, as international economic relations are increasingly driven by competition between often authoritarian blocs, enlargement of the EU would strengthen the voice of those countries that are committed to democracy and rules-based trade. The increased geographic range of an enlarged EU would also make it better able to buffer and withstand local or regional shocks such as extreme weather events or animal disease outbreaks that can overwhelm individual countries.

5.2. Implications for the Common Agricultural Policy and the EU budget

While negotiations on accession continue, the EU will be increasingly pre-occupied in the coming months and years with the process of adopting a new budget (Multiannual Financial Framework – MFF) for the period 2028-2034, and with the related issue of agreeing on a reformed CAP for the same period. The nature and extent of the changes that are made to the CAP as an outcome of this process will affect the agricultural policy path that Ukraine will have to embark upon as an accession candidate.

In July 2025, the EU Commission published its proposals for the next MFF (European Commission, 2025e) as well as for a reform of the CAP for the seven years beginning in 2028 (EU Commission 2025f). The proposals include provisions for merging the CAP with 13 other EU funds such as the European Regional Development Fund and the Cohesion Fund into a single fund for National and Regional Partnership Plans (NRPP). The Commission argues that this step would simplify design and implementation and reduce administrative burdens. In addition, it would give Member states more flexibility to tailor implementation to their individual priorities. In response to concerns that this flexibility could result in a substantial reduction in the spending that benefits agriculture, the Commission foresees that a fixed minimum share of the NRPP funds would be "ring-fenced" for agriculture. Matthews (2025a) nevertheless estimates that these proposals would reduce EU spending on income support for farmers by roughly 15% compared with the ongoing 2021-2027 period. However, he

also points out that the final outcome depends on the allocation and co-financing choices that individual EU members make (Matthews, 2025b).

These proposals have met with strong criticism from a wide range of agricultural interests at the EU and member-state levels. Farm groups, national ministers of agriculture and many members of the European Parliament who focus on agricultural policy issues are not satisfied by promises that agricultural support will be ring-fenced. They insist that the CAP should remain a separate item in the MFF, and that it should receive more, not less funding than in the past. The Commission argues that the EU must react to new geopolitical and economic challenges by giving more priority to spending on innovation, competitiveness, and defence. At the moment, no compromise is in sight and the path to a new MFF and CAP reform in the EU appears thorny.

The EU has undergone seven enlargements since the original six members signed the Treaty of Rome in 1957 (European Commission 2025g). Of these enlargements, three (Greece in 1981, Austria, Finland and Sweden in 1995, and Croatia in 2013) had comparatively manageable implications for agriculture in the EU. By contrast, the other four enlargements had major agricultural implications. These are the first enlargement in 1973 (Denmark, Ireland and the United Kingdom), the third so-called Iberian enlargement in 1986 (Portugal and Spain), and the combined fifth and sixth so-called 'Eastern enlargements' in 2004 and 2007 (Czechia, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, followed by Bulgaria and Romania). Each of these enlargements added roughly one-third to the EU's total agricultural area, and at least 15% to the EUs aggregate agricultural output.

Ukrainian accession would add roughly 25% to the EU's total agricultural area, and 31% to the EU's arable land (FAO 2025a). Hence, like the 1973, Iberian, and Eastern enlargements, it would substantially increase the cost of the CAP. Table 6 presents an overview of various estimates of the annual gross CAP transfers that Ukraine would receive from the EU. Since average incomes in Ukraine are much lower than those in the EU, and given its current war-torn condition, Ukraine would make only small contributions to the EU budget. As a result, net transfers to Ukraine would differ little from the gross transfers presented in Table 6.

The estimates in Table 6 are conditional on many assumptions. For example, they are based on the assumption that Ukraine will join the EU under current CAP rules. In particular, this implies that Ukrainian farmers would be eligible to receive direct per-hectare payments, although assumptions about the size of these payments differ. However, Ukraine will join under future CAP rules, and as outlined above, it is unclear what shape these will take. Nevertheless, it is clear that Ukraine's accession to the EU will add substantially to the cost of the CAP, and to other areas of EU spending. Darvas et al. (2024) estimate that Ukraine's accession would increase the total EU budget by 16-19 bill. Euro annually under conditions of the current 2021-2027 MFF. Existing member states would have to cover these costs which, however, would be partially offset by increased revenues for example from taxes on the earnings of qualified Ukrainians working in the EU, and of EU companies carrying out reconstruction projects in Ukraine.

Table 6: Estimates of annual CAP gross transfers to Ukraine following accession under current CAP rules

Study	Estimated CAP transfer to Ukraine (bill. Euro)
Council Secretariat (2023)	13.8
Emerson (2022)	10.4
Lindner et al. (2023)	7.6
Busch and Sultan (2023)	10 – 13
Matthews (2024)	13.4
Darvas et al. (2024)	9.7 – 12.1

Source: Matthews (2024) and Darvas et al. (2024).

Budget costs are important, but policy decisions should be based on a comprehensive assessment of all economic costs and benefits. It is striking that while a number of estimates of the effects of Ukraine's accession on the CAP budget are available (as shown in Table 6), to the best of our knowledge no comprehensive cost-benefit estimates of the effects of accession on European agriculture and the EU economy as a whole have been published.

In any event, adding issues related to EU enlargement and especially Ukrainian accession would complicate current MFF and CAP debates, perhaps to the point of intractability. It is therefore safe to assume that the ongoing MFF and CAP reform process will be completed on the assumption that January 1 2035 is the earliest possible date for Ukraine's accession.

5.3. Implications for Markets in the EU

Ukraine's accession to the EU will not only have implications for the CAP and CAP spending, it will also affect agricultural markets in the EU. Many farm leaders and politicians in the EU warn of dire consequences. For example, in 2023 the president of the French farmers' union FNSEA, Arnaud Rousseau, stated that Ukraine's assession to the EU would be a "catastrophe" for agriculture in Europe (BFM Business, 2023). According to Poland's Deputy Agriculture Minister Michał Kołodziejczak in 2023:

> "*Ukrainian agriculture is capable of destabilizing food security in any country of the European Union. If we want this, we can immediately open the doors and say, 'We are closing our agricultural enterprises, because their work will not make sense*" (Sputnik International, 2023).

In the same interview, Deputy Minister Kołodziejczak claimed that Ukrainian agriculture is monopolised by about 95 holdings, and suggested a 20-year moratorium on agricultural imports from Ukraine to the EU following accession.

These statements are typical of the misinformation and fear that is being spread in connection with Ukraine's accession to the EU. That a media channel such as Sputnik should carry them is telling. Previous EU enlargements have seen similar campaigns in which farm interests in the EU warn that agriculture in candidate countries will flood and disrupt EU markets. And each enlargement round has seen farmers who were candidates for accession in the previous round changing sides and adopting the arguments of those farmers who had wished to block their membership. A recent statement by Danish Minister of Agriculture Jacob Jensen is refreshing in this regard:

> *"I can remember the same kind of concerns and discussions ahead of the historic agreement on the enlargement of the EU with ten new Member States during the Danish Presidency back in 2002. … I think we can all agree that that went pretty well."* (Jensen, 2025).

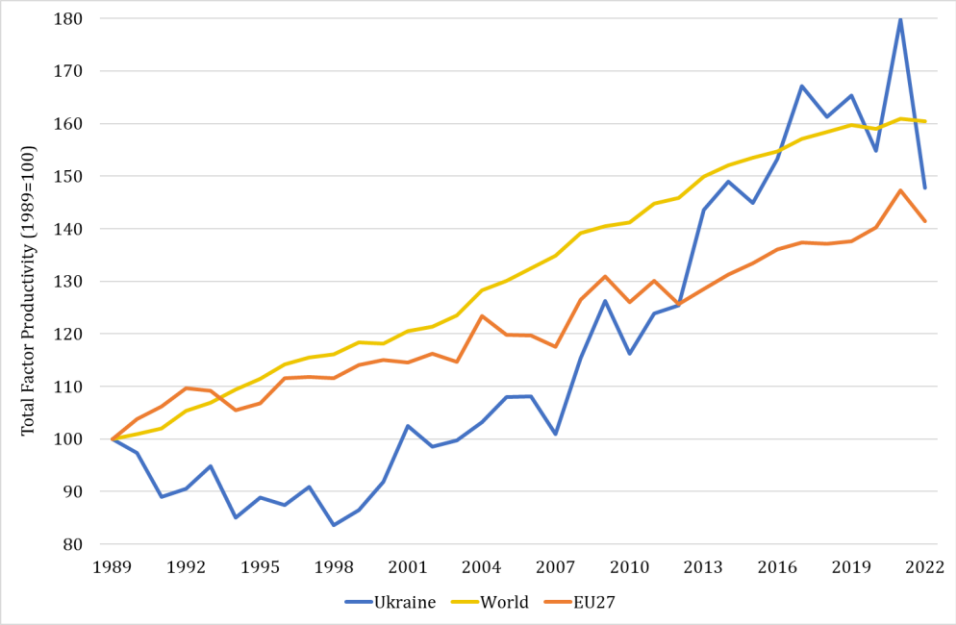
Enlargement and the accompanying economic integration and liberalisation of trade within the EU's common market leads to gains and losses in the EU and in new member states. Past enlargements have shown that actual gains greatly outweigh actual losses (Grassi, 2024). However, this is scant comfort to those groups that lose from exposure to new competition and can therefore be expected to mobilise and advocate against enlargement. Appropriate compensation packages are one means of overcoming political opposition to enlargement, but it is important that compensation be based on an objective assessment of losses.

There are many reasons to conclude that the negative effects of Ukrainian accession on agricultural interests in the EU are overestimated, and the positive effects underestimated. First, if Ukraine does not join the EU, its agricultural exports will not simply disappear. Instead, they will continue to affect EU agriculture indirectly as competition on third-country markets. On integrated global markets for grains and oilseeds, one million additional tons of Ukrainian wheat boost supply and depress world market prices, and thus the prices received by farmers in the EU. This occurs regardless of whether this wheat is exported directly to third countries, or transits through the EU on the way to third countries, or stays in the EU, displacing some domestic EU production and thus leading to more exports from some other part of the EU.

One might argue that without EU membership and CAP support, Ukrainian agricultural production and thus global supply will not grow as quickly as it would if Ukraine were a member of the EU. This is questionable. Productivity has grown strongly in Ukraine over the last decades despite erratic policies that have provided little support and even taxed agriculture in the country in some years (Figure 6). Furthermore, if Ukraine does not join the EU, Ukrainian agriculture will continue to enjoy competitive advantages in the form of lower standards, e.g., in the areas of animal welfare or continued use of plant protection products that are not permitted in the EU. To some extent, therefore, Ukrainian agriculture inside the EU and subject to EU regulations would pose a smaller competitive threat than Ukrainian agriculture outside the EU.

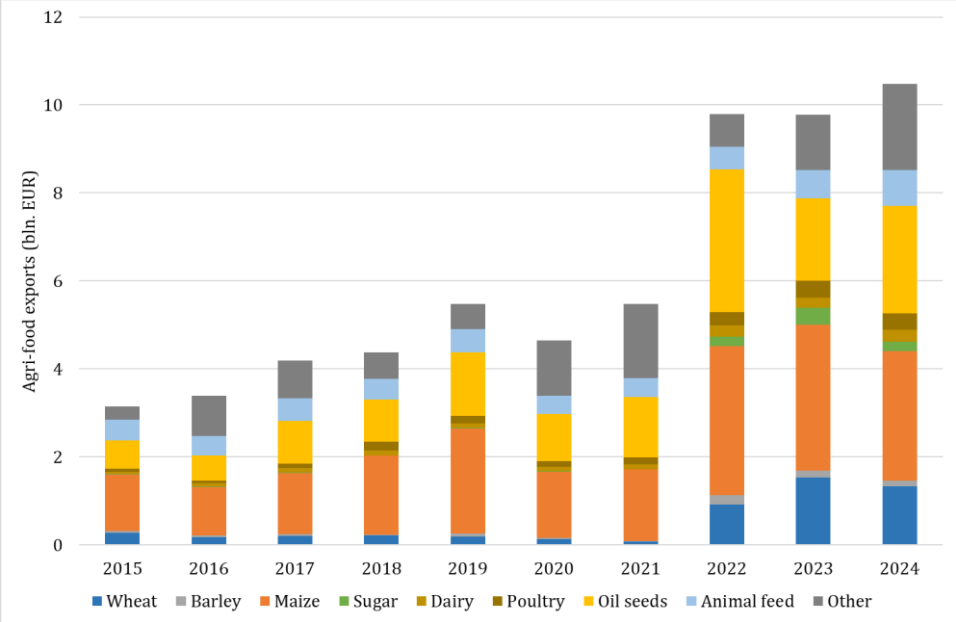
Of course, whether or not Ukraine is a member could influence regional price gradients within the EU by depressing prices in regions that border directly on Ukraine. Hence, it is no surprise that the most vociferous objections to Ukraine's accession, such as the one cited above by Deputy Minister Kołodziejczak, have been raised in countries such as Poland, Hungary and Slovakia. Fears of Ukrainian competition in these countries have been fuelled by increased imports of agricultural products from Ukraine since Russia's war began. Figure 7 shows that EU imports of all categories of agricultural products from Ukraine have indeed increased sharply since 2022.

Figure 6: Agricultural productivity growth in the EU, Ukraine and the world (1989-2022)



Source: USDA ERS (2025), own calculations.

Figure 7: The composition and evolution of Ukrainian agri-food exports to the EU (2015-2024)



Source: Source: Eurostat (2025), online data code: ds-045409, own calculations.

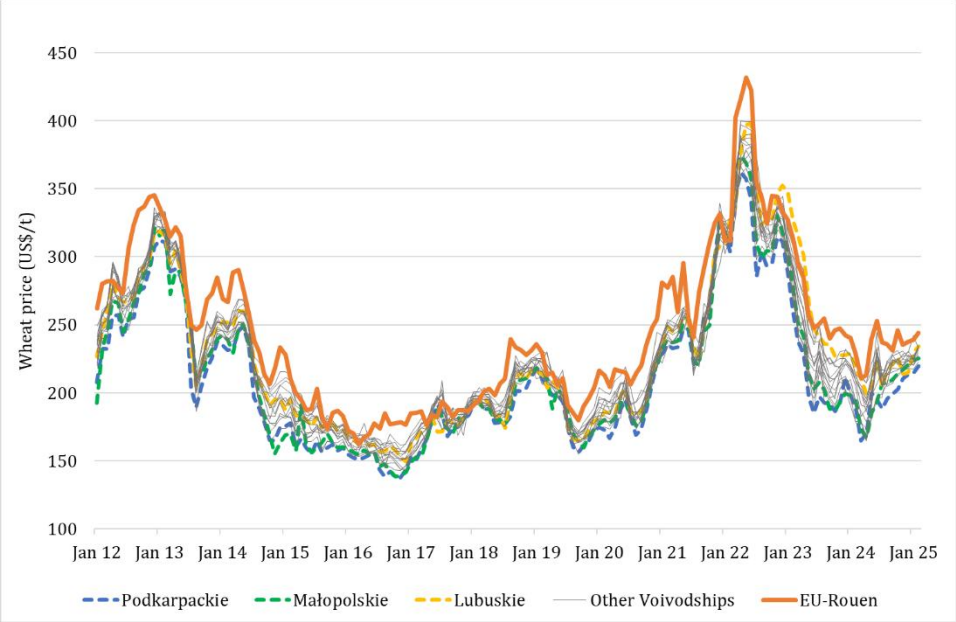
Note: The following HS codes were used: 1001, 1003, 1005, 0207, 04, 12, 17 and 23. SITC sections 0, 1, and 4 are included in total agri-food exports.

Farmers and politicians in Poland have complained especially about imports of wheat from Ukraine, claiming that it has depressed prices especially in regions close to Poland's border with Ukraine. However, despite claims that "cheap Ukrainian products" have led to "market distortion, loss of competitiveness and low profitability"

(Council of the European Union 2025) we are not aware of a single scientific study that provides rigorous quantitative evidence of such an effect.[1]

Figure 8 shows how monthly producer prices for wheat in Polish Voivodships have evolved between January 2012 and February 2025. Prices in three Voivodships in the east and south of Poland close to Ukraine (Lubuskie, Małopolskie and Podkarpackie) and a representative global price, the export price recorded in Rouen, France, are highlighted. We see that price levels in Poland follow the price in Rouen quite closely. This is not surprising, because Poland is a large net exporter of wheat and Polish markets are therefore integrated with global markets. Polish prices generally lie somewhat below the price in Rouen because Poland is farther away from world markets than Rouen, which leads to a deduction for additional transport and handling costs. Prices in southern and eastern regions of Poland tend to lie farthest below the price in Rouen because these regions are farther from world markets than regions in the north and west. Due to these linkages with world markets, prices naturally fell in Poland after the peak in early 2022 that was triggered by Russia's war on Ukraine; world market prices were falling and prices in Poland followed down, just as they had followed up in 2020 and 2021.

Figure 8: Producer prices for wheat in Polish Voivodships and Rouen in the EU (2012-2025)



Source: Prices in Złoty from Statistics Poland (2025) converted into US$ using OECD (2025b).

To take a closer look at allegations that grain imports from Ukraine depressed prices in Poland we take a look at three Voivodships, two that border on Ukraine (Lubelskie and Podkarpackie) and one in western Poland (Lubuskie). For each of these Voivodships we estimate a baseline relationship between the regional producer price and the price in Rouen over the period between January 2012 and January 2022. We

[1] Hamulczuk et al. (2023) study the integration of Ukrainian and international grain markets since Russia's war began, but do not look in detail at effects on prices in Eastern European countries, which they suggest should be a topic for future research.

then use this baseline relationship to forecast regional producer prices over the period February 2022 to February 2025. Appendix Figures 1, 2 and 3 show the actual and the forecast prices for Lubelskie, Podkarpackie, and Lubuskie, respectively, and 95% confidence intervals for the forecast prices that account for statistical uncertainty in the estimated relationship. We see that for much of the period following the beginning of Russia's war when Ukrainian wheat was entering Poland, prices in Lubuskie were somewhat higher than expected based on the historical baseline price relationship. In Podkarpackie and Lubelskie, prices in 2023 and early 2024 were somewhat lower. Multiplying the monthly deviations of the actual producer prices from the forecast prices with the monthly procurement amounts in each Voivodship (Statistics Poland 2025), we estimate that over the three years between February 2022 and February 2025, revenues from wheat sales in Lubelskie and Podkarpackie were lower than expected based on historical price relationships (14.9 and 5.0 million US$, respectively), and revenues from wheat sales in Lubuskie were higher (8.4 mill. US$).

This is a simple analysis that only considers a single product and three Voivodships, and does not account for many possible confounding factors such as price effects due to quality differences between wheat at different locations. Nevertheless, the analysis suggests that imports of wheat from Ukraine have not led to large, systematic reductions in producer prices in Poland. Prices in Poland have largely followed the ups and downs of the world market. There is certainly no evidence of losses on the part of grain producers in Poland that would justify measures such as the 486 mill. Euro of aid that the Polish government provided under the so-called "Temporary Crisis and Transition Framework for State aid measures to support the economy following the aggression against Ukraine by Russia" (European Commission 2024a). Some analysts suggest that the issue of alleged losses due to imports from Ukraine has been instrumentalised by political parties fighting for position in Polish parliamentary elections in 2023, local elections in 2024, and presidential elections in 2025 (see, for example, Kość and Brzeziński 2023, and Pryshchepa 2024).

Sugar imports from Ukraine have also been accused of depressing prices in the EU. In June 2022 in response to Russia's attack, the EU fully liberalised sugar trade with Ukraine under the ATMs. Prior to 2022, EU imports of sugar from Ukraine were sporadic and never amounted to more than 11% of total EU imports in any given month. However, in late 2022 in response to the ATMs, EU imports of white sugar from Ukraine increased, and by late 2023 and early 2024 Ukraine was supplying over 50% of the EU's monthly sugar imports (von Cramon-Taubadel and Nivievskyi 2024). In July 2024, in response to pressure from domestic sugar producers and refiners, the EU reintroduced tariff rate quotas for sugar from Ukraine.

Producers and refiners in the EU argued that imports of sugar from Ukraine had flooded the market and depressed domestic prices. There is little empirical evidence to support these claims. EU imports of sugar increased by roughly 1.1 million tonnes (from 1.5 to 2.6 million tonnes) between 2021/22 and 2022/23, but over the same period EU production fell by over 2 million tonnes, and domestic sugar prices increased to over $800/tonne. Hence, imports from Ukraine in 2022/23 did not flood the EU

market, they helped to relieve a domestic shortage and kept prices from climbing even higher. Imports from Ukraine likely displaced imports from other sources; some refiners in the EU would have preferred to import and process raw sugar from other countries, rather than importing white sugar from Ukraine. Ultimately, white sugar imports from Ukraine fostered competition and the contestability of sugar markets in the EU. There is also no evidence that these imports affected farm-gate prices for sugar beets in the EU (von Cramon-Taubadel and Nivievskyi, 2024).

While losses due to imports of agricultural products from Ukraine are overstated, the benefits that these imports generate are often understated. Imports from Ukraine may increase competition for producers of wheat or sugar in the EU, but they also make users of wheat and sugar in the EU more competitive. In recent years the EU has been an annual net exporter of roughly 1.6 million tonnes sugar in processed form. For some branches of the food processing industry, such as confectionary and the production of preserves, sugar is a major cost component. The competitiveness of firms in these branches depends on reasonably-priced and reliable supplies of sugar, and in 2022/23 and 2023/24, Ukrainian sugar made a significant contribution to ensuring the availability of such supplies. Similarly, while some farmers in the EU complain about imports of grain and oilseeds from Ukraine, other farmers in the livestock sector benefit from lower feed costs. If it is true that imports of cereals such as maize and wheat from Ukraine have depressed prices in regions in Poland and Hungary that border on Ukraine (even though we find no evidence of such an effect), then it must be the case that individuals or firms in those regions of Poland and Hungary, most likely feed processors and livestock farmers, are taking advantage of the situation and purchasing the cereals. Otherwise, the Ukrainian cereals would simply transit through these regions without exerting any price effects.

We do not present these examples to claim that there will only be winners and no losers from progressive liberalisation of agricultural trade with Ukraine on the road to EU accession. Some groups in the EU, and also in Ukraine, stand to lose and will be faced with difficult adjustments. However, losses should be evaluated objectively and balanced against gains, not exaggerated and instrumentalised for political purposes. Ukrainian agricultural products can make a substantial contribution to the continued international competitiveness of the food processing industry in the EU, generating value-added and employment. Firms in the EU that produce and construct grain storage and port facilities, agricultural machinery, animal housing and manure treatment systems also stand to benefit from the rebuilding of Ukrainian agriculture. Policy makers should base their decisions on objective assessments of these complementarities.

5.4. Agricultural Production and Food Safety Standards

Under the terms of its latest trade agreement with the EU, which came into force in late October 2025, Ukraine has committed to align its agricultural production standards with the standards in place in the EU by 2028. These standards cover the

use of pesticides and herbicides as well as the use of veterinary medicines, and animal welfare standards for the housing, transport and slaughtering of livestock.

Agricultural interests in the EU often cite concerns about the safety of agricultural imports from Ukraine, arguing that lower standards in Ukraine not only give Ukrainian farmers an unfair competitive cost advantage, they also endanger the health of EU consumers. A Salmonella outbreak in Sweden that has been linked to eggs imported from Ukraine is sometimes cited as an example of this danger (Poultrymed 2024; Food Safety News, 2025).

Ukraine and the EU release regular reports on the progress made in the implementation of their Association Agreement (Government of Ukraine 2024) and towards accession (European Commission 2025h). Agricultural producers in the EU acknowledge that progress is being made on paper, but in a recent joint statement express doubts about "genuine implementation", calling for "controls on the ground and for strict traceability controls by the European Commission" (AVEC, 2025).

It is important to distinguish between production standards, which can influence the cost of producing a food product, and food safety standards that regulate the permissible characteristics of this product (e.g., pesticide residues, bacterial contamination). Different production standards do not necessarily lead to differences in food safety. Hence, the use of certain plant protection products that have been banned in the EU might give Ukrainian farmers a cost advantage over their counterparts in the EU, but it does not necessarily imply that the wheat or maize that they produce endangers the health of consumers in the EU (or Ukraine). Similarly, the higher animal welfare standards applied in the EU increase the costs of livestock production, and many consumers in the EU may consider them to be necessary from an ethical perspective, but they do not necessarily make the resulting animal products such as meat or milk safer for consumers.

The EU controls the safety of food imports that enter its common market to protect its consumers, and it enforces strict production standards and rules on traceability to ensure the safety of food produced in the EU. Imports from Ukraine must comply with the EU's food safety standards, and are rejected at the border when they fail to do so (see for example UNIDO 2024). In addition, in order to become an EU member, Ukraine will have to align its production standards with stricter standards in the EU, even if these stricter standards go beyond what is necessary to ensure food safety. Finally, Ukraine will have to demonstrate that it is able to enforce those standards on the ground.

This is a challenging task that requires not only the adoption of legislation and regulations but also the establishment of reliable institutions to monitor and control the implementation of production standards, and equipping these institutions with trained personnel and infrastructure (e.g., laboratories). The required institutions need to be centrally coordinated but operational at the regional and local level. Ukraine can attract substantial donor support for this task. Ukraine would be well-advised to take the issue of aligning with and implementing EU standards very seriously, as those who

oppose Ukrainian accession to the EU will be sure to exploit every actual or perceived delay or violation.

6. Strategies and recommendations

The analysis presented suggests that the effects of Ukraine's accession to the EU will be overwhelmingly positive. In the following we derive a set of strategic recommendations for harnessing synergies and addressing challenges to ensure that these effects are realised. To this end we follow the concept of a TOWS matrix, which looks at combinations of strengths, weaknesses, opportunities and threats to map out strategic options.

SO strategies use strengths to exploit opportunities. In our context this entails leveraging Ukraine's and the EU's agricultural strengths to advance competitiveness, sustainability, and resilience in an enlarged EU. This includes:

- Taking advantage of the complementary strengths in EU and Ukrainian agriculture to enhance the competitiveness of an enlarged EU's agri-food sector. Ukraine is a reliable supplier of agricultural commodities; the EU has a highly competitive food processing sector. Combining these strengths promises to further develop the EU's position as a leading exporter of high-value food products.

- Harnessing public and private finance in the EU to assist Ukraine as it builds back better. The task of post-war reconstruction and repair in Ukrainian agriculture will be immense but also provide many profitable opportunities for investment. Focus public expenditure in Ukraine on removing barriers to private financing and on investments in the provision of public services that attract and support private finance.

- Aligning with the EU's strong network of centralised, national, regional and local institutions for implementing agricultural policy, delivering support, controlling compliance and ensuring product traceability and food safety. Accession provides Ukraine with an opportunity to align with these strengths in the EU and thus strengthen its institutional framework with the support of EU and other donor funding.

WO strategies use opportunities to overcome weaknesses. The EU and Ukraine can use opportunities to address structural and institutional weaknesses in their agri-food sectors.

- Within Ukraine, accession provides an opportunity to address weak governance in and institutions for the design, implementation and evaluation of agriculture policies.

- In both the EU and Ukraine, opportunities provided by new technologies can boost productivity growth in agriculture, increasing both competitiveness and sustainability.

- Within the EU, accelerated structural change in the coming decade as the 'baby boom' generation of farmers retires is an opportunity to address the structural weakness of small and very small farm in many regions.
- Enlargement provides the EU with an opportunity address the CAP's weaknesses, especially the wasteful use of the bulk of its budget for poorly-targeted per hectare payments.

ST strategies use strengths to mitigate threats. The EU and Ukraine can use their combined agricultural strength to address the many current and emerging threats that face agriculture.

- The combined strength of agriculture in the EU and Ukraine will make an enlarged EU more resilient and less vulnerable to shocks such as disruptions in global trade or extreme weather events.
- Use the stronger position of an enlarged EU in trade negotiations with partners and rival blocs. An enlarged EU will also be in a stronger position to pursue environmental and animal welfare agendas in its bilateral and multilateral dealings with other countries.
- Maintain and further develop trade infrastructure in an enlarged EU to reduce the threat of interruptions to trade via the Black Sea. Under ideal conditions, the Black Sea route will carry the bulk of Ukraine agricultural exports. If it is blocked, however, then routes through the EU are the only alternative. Further developing and maintaining these land routes will strengthen the logistic capacity of an enlarged EU. This will benefit agriculture in Ukraine, but it will also support intra-EU trade in a wide variety of agricultural and non-agricultural products to the benefit of especially the land-locked countries in the Central and Eastern EU.
- Use strong analytical capacities in the EU to counter one-sided and false information on the effects of Ukrainian accession to the EU. It is striking that there are numerous published estimates of the effects of Ukraine's accession on the EU budget, but no comprehensive assessments of the benefits it would generate for agriculture and the economy as a whole in an enlarged EU. Farm interests and politicians warn of 'catastrophic impacts' on agriculture in the EU and claim that imports of agricultural products from Ukraine are 'flooding' the EU and depressing prices, but there are no rigorous empirical studies to back up the allegations.
- Some groups in the EU and in Ukraine will lose as a result of enlargement. The EU has the means and the analytical and institutional capacity to identify and provide targeted assistance to these groups to reduce opposition to enlargement.

WT strategies minimise weaknesses and avoid threats.

- Population decline is a serious threat for Ukraine, and could be exacerbated by emigration to the EU following accession. There is no easy solution to this

problem, but rapid rebuilding and recovery can entice Ukrainian citizens to return to their country, or keep them from leaving in the first place.

- Ukraine's commitment to progress on fundamental governance issues such as corruption must be clear and unequivocal. Failure to make progress in this area could delay or even derail the accession process. At the very least it would provide those who oppose Ukraine's accession with arguments, and weaken the credibility of those in the EU who support Ukraine's candidacy.
- There will be strong opposition to Ukraine's accession in parts of the EU, much of it based on misinformation, which must be countered. Otherwise, the EU can draw on a variety of measures that it has used to manage past enlargements in the area of agriculture. These include:
    - phasing in entitlements to CAP spending over lengthy transition periods,
    - granting transition periods for policy alignment,
    - adopting safeguard clauses for trade in products deemed sensitive,
    - increasing the CAP budget, and
    - adjusting EU policies prior to accession.

    Furthermore, under its "revised enlargement methodology" adopted in 2020, the EU proposes to pursue "avenues for gradual integration" that include "merit-based and reversible frontloading of certain benefits and obligations of EU membership" (EU Commission 2024).

7. References

Akhvlediani, T. (2025) Why the EU-Ukraine DCFTA review matters. Centre for European Policy Studies (CEPS), https://www.ceps.eu/why-the-eu-ukraine-dcfta-review-matters/.

Aubert, P.-M. (2024) The Farm to Fork Strategy: reasons for failure and how to move forward. IDDRI Note, February 2024, https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Autre%20Publication/NOTE%20Veblen%20paper%20agri%20EN.pdf.

AVEC (Association de l'aviculture, de l'industrie et du commerce de volailles dans les pays de l'Union Européenne) (2025) Joint Statement : EU producers urge action on persistent concerns in the revision of the EU–Ukraine Association Agreement. https://avec-poultry.eu/news/joint-statement-eu-producers-urge-action-on-persistent-concerns-in-the-revision-of-the-eu-ukraine-association-agreement/.

BFM Business (2023) L'entrée de l'Ukraine dans l'UE, "une catastrophe" pour l'agriculture, selon le président de la FNSEA. BMF Business, November 8 2023, https://www.bfmtv.com/economie/l-entree-de-l-ukraine-dans-l-ue-une-catastrophe-pour-l-agriculture-selon-le-president-de-la-fnsea_AD-202311080948.html.

Council of the European Union (2025) Information from Slovakia on Trade relations with Ukraine in view of the revised EU-Ukraine Deep and Comprehensive Free Trade Area (DCFTA). AOB item for the meeting of the "Agriculture and Fisheries" Council on 22 and 23 September 2025. https://data.consilium.europa.eu/doc/document/ST-12908-2025-INIT/en/pdf.

Countryman, A.M., Beghin, J.C., Glauben, T. and Grey, I. (2025) Global economic effects of war-induced agricultural export declines from Ukraine. Food Policy 123, https://doi.org/10.1016/j.foodpol.2024.102621.

CSIS (Center for Strategic and International Studies) (2024). Demining Ukraine's Farmland: Progress, Adaptation, and Needs. Washington, DC. https://www.csis.org/analysis/demining-ukraines-farmland-progress-adaptation-and-needs.

Darvas, Z., Dabrowski, M., Grabbe, H., Moffat, L.L., Sapir, A. and Zachmann, G. (2024) Ukraine's path to European Union membership and its long-term implications, Policy Brief 2024/05, Bruegel, https://www.bruegel.org/policy-brief/ukraines-path-european-union-membership-and-its-long-term-implications.

Deininger, K., Ali, D.A., Kussul, N., Shelestov, A., Lemoine, G. and Yailimova, H. (2023) Quantifying war-induced crop losses in Ukraine in near real time to strengthen local and global food security, *Food Policy* 115, https://doi.org/10.1016/j.foodpol.2023.102418.

Deutsche Welle (2014) Ukraine ratifies EU trade pact. https://www.dw.com/en/ukraine-ratifies-eu-association-agreement/a-17925681.

EBRD (European Bank for Reconstruction and Development) (2023) Transition Report 2023-24: Transitions big and small, https://www.ebrd.com/news/publications/transition-report/transition-report-202324.html.

European Commission (2020) A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. COM(2020) 381 final, https://eur-lex.europa.eu/resource.html?uri=cellar:ea0f9f73-9ab2-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF.

European Commission (2022) Farmers and the agricultural labour force – statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?oldid=431368.

European Commission (2023a) Monitoring Agri Trade Policy. Thematic analysis: Diversification of EU agri-food trade. https://agriculture.ec.europa.eu/system/files/2023-10/monitoring-agri-food-trade-diversification-2012-22_en.pdf.

European Commission (2023b) Regulation of the European Parliament and of the Council on plants obtained by certain new genomic techniques and their food and feed. COM(2023) 411 final, https://food.ec.europa.eu/document/download/c03805a6-4dcc-42ce-959c-e4d609010fa3_en?filename=gmo_biotech_ngt_proposal_2023-411_en.pdf.

European Commission (2024a) State Aid SA.113894 (2024/N) – Poland TCTF: Aid for the cereal producer, who is at risk of losing financial liquidity due to restrictions on the agricultural market caused by the Russian aggression against Ukraine. C(2024) 3593 final, https://ec.europa.eu/competition/state_aid/cases1/202422/SA_113894_30.pdf .

European Commission (2024b) Communication on pre-enlargement reforms and policy reviews. COM(2024) 146 final, https://commission.europa.eu/document/download/926b3cb2-f027-40b6-ac7b-2c198a164c94_en?filename=COM_2024_146_1_EN.pdf.

EU Commission (2025a) Ukraine – Membership status: candidate country. https://enlargement.ec.europa.eu/european-neighbourhood-policy/countries-region/ukraine_en.

EU Commission (2025b) EU and Ukraine reach agreement in principle on a modernised trade relationship, Press Release IP/25/1672, 30 June. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_25_1672/IP_25_1672_EN.pdf.

European Commission (2025c) Upgraded EU-Ukraine trade agreement enters into force. Press Release IP/25/2543, 29 October. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_25_2543/IP_25_2543_EN.pdf.

European Commission (2025d) Agri-Food Trade Statistical Factsheet. https://agriculture.ec.europa.eu/document/download/98c0d1eb-4fb9-4b8c-87c7-8034c17b1e82_en?filename=agrifood-extra-eu27_en.pdf.

European Commission (2025e) The 2028-2034 EU budget for a stronger Europe. https://commission.europa.eu/strategy-and-policy/eu-budget/long-term-eu-budget/eu-budget-2028-2034_en.

European Commission (2025f) The next chapter for the CAP. https://agriculture.ec.europa.eu/media/news/next-chapter-cap-2025-07-17_en.

European Commission (2025g) EU Enlargement. https://european-union.europa.eu/principles-countries-history/eu-enlargement_en.

European Commission (2025h) Ukraine Report 2025. https://enlargement.ec.europa.eu/ukraine-report-2025_en.

European Parliamentary Research Service (ERPS) (2024) Ukrainian Agriculture: From Russian invasion to EU integration. https://www.europarl.europa.eu/RegData/etudes/BRIE/2024/760432/EPRS_BRI(2024)760432_EN.pdf.

Eurostat (2022) Farms and farmland in the European Union – statistics. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Farms_and_farmland_in_the_European_Union_-_statistics.

FAO (2025a) FAOSTAT. FAO, Rome. https://www.fao.org/faostat/en/#home.

FAO (2025b) Ukraine: Impact of the war on agricultural enterprises. FAO, Rome. https://openknowledge.fao.org/server/api/core/bitstreams/2f618495-a65e-4b7b-9320-2c0d02d2ab6e/content.

Finger, R. (2023) Digital innovations for sustainable and resilient agricultural systems. European Review of Agricultural Economics 50(4), https://doi.org/10.1093/erae/jbad021.

Food Safety News (2025) Standards issues threaten to damage EU-Ukraine deal. November 4 2025, https://www.foodsafetynews.com/2025/11/standards-issues-threaten-to-damage-eu-ukraine-deal/.

Gagalyuk, T. and Valentinov V. (2019) Agroholdings, turbulence and resilience. Journal of East European Management Studies 24(3), https://www.jstor.org/stable/10.2307/26778309.

Government of Ukraine (2024) Report on the implementation of the Association Agreement between Ukraine and the European Union for 2024. https://eu-ua.kmu.gov.ua/wp-content/uploads/Zvit-Ugoda-pro-asotsiatsiyu-EN.pdf.

Government of Ukraine (2025) Association Agreement between the European Union and Ukraine. Government of Ukraine official website, https://www.kmu.gov.ua/en/yevropejska-integraciya/ugoda-pro-asociacyu.

GLOBSEC (2024) Cleaning the Augean Stables: Humanitarian Demining in Ukraine. file:///C:/Users/scramon/Downloads/Cleaning%20the%20Augean%20Stables%20Demining%20Ukraine.pdf.

Grassi, B. (2024) The EU miracle: When 75 million reached high income. Centre for Economics Policy Research (CEPR), https://cepr.org/voxeu/columns/eu-miracle-when-75-million-reached-high-income.

Grieveson, R., Jovanovic, B., Kosmehl, M., Landesmann, M., Pindyuk, O., Tverdostup, M. and Weiss, S. (2023) Outlier or not? The Ukrainian economy's preparedness for EU accession. Gütersloh: Bertelsmann Stiftung. https://doi.org.10.11586/2023087.

Hamulczuk, M., Cherevyk, D., Makarchuk, O., Kuts, T., & Voliak, L. (2023). Integration of Ukrainian Grain Markets with Foreign Markets During Russia's Invasion of Ukraine / Integracja ukraińskich rynków zbóż z rynkami zagranicznymi w czasie inwazji rosji na Ukrainę. Zagadnienia Ekonomiki Rolnej /Problems of Agricultural Economics 377(4), https://doi.org/10.30858/zer/177396.

He, T., Ma, W., Zhang, X., Wang, C., Chen, W. and Wang, L. (2023) Quantitative analysis of abandonment and food production loss in Eastern Ukraine under armed conflict using Sentinel-2 imagery, Journal of Cleaner Production, 412, https://doi.org/10.1016/j.jclepro.2023.137367.

Hristov, J., Toreti, A., Domínguez, I.P., Dentener, F. and eight co-authors (2020) Analysis of climate change effects on EU agriculture by 2050. JRC Technical Report, https://adaptecca.es/sites/default/files/documentos/pesetaiv_task_3_agriculture_final_report.pdf.

IAEA (International Atomic Energy Agency) (2025) IAEA warns of nuclear accident risk in Ukraine amid Russian attacks. dpa international, June 4 2025, https://www.yahoo.com/news/iaea-warns-nuclear-accident-risk-035742405.html.

Jensen, J. (2025) Cited in AGRA-FACTS No. 87-25, September 22 2025.

Kottász, Z. (2025) Farmers Threaten Fresh Protests as Brussels Pushes Cuts and Trade Deals. The European Conservative, September 22 2025, https://europeanconservative.com/articles/news/eu-commission-farmers-threaten-protests-cap-cuts-mercosur/.

Kość, W. and Brzeziński, B. (2023) Why Poland dumped Ukraine to help its farmers. Politico, May 2 2023, https://www.politico.eu/article/poland-farmer-law-and-justice-agriculture-grain-war-ukraine-russia/*.*

Krakovska, S. and Kryshtop, L. (2024) Overall Climate Change Impact Assessment for Ukraine. Study published by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). https://ukrainian-climate-office.org/wp-content/uploads/2024/12/Overall-climate-change-impact-assessment.pdf.

KSE (Kyiv School of Economics) (2024) Agricultural War Damages, Losses, and Needs Review. https://kse.ua/wp-content/uploads/2024/02/RDNA3_eng.pdf.

Kussul, N., Shelestov, A., Yailymov, B., Yailymova, H., Lemoine, G. and Deininger, K. (2025) Assessment of war-induced agricultural land use changes in Ukraine using machine learning applied to Sentinel satellite data. International Journal of Applied Earth Observation and Geoinformation 40. https://doi.org/10.1016/j.jag.2025.104551.

Leal Filho, W., Fedoruk, M., Paulino Pires Eustachio, J.H., Barbir, J., Lisovska, T., Lingos, A. and Baars, C. (2023) How the war in Ukraine affects food security, *Foods* 12(21), https://doi.org/10.3390/foods12213996.

Lüttringhaus, S., Noleppa, S., Gornott, C. and Lotze-Campen, H. (2019) Climate change impacts on European crop production: A literature review. HFFA Research Paper 01/2019, https://www.pik-potsdam.de/members/gornott/hffa-research-paper-climate-change-impacts.pdf.

Matthews, A. (2024) Adjusting the CAP for new EU members: Lessons from previous enlargements. Swedish Institute for European Policy Studies, https://www.sieps.se/media/emhj2zru/2024_20epa.pdf.

Matthews, A. (2025a) The Commission's CAP budget proposals in the next MFF. https://capreform.eu/the-commissions-cap-budget-proposal-in-the-next-mff/.

Matthews, A. (2025b) Which countries gain or lose from the National and Regional Partnership Fund? https://capreform.eu/which-countries-gain-or-lose-from-the-national-and-regional-partnership-fund/.

Matthews, A. (2025c) The farmer protests in the EU. In: Progressive Yearbook 2025, Foundation for European Progressive Studies (FEPS), https://feps-europe.eu/wp-content/uploads/2025/01/10.-The-farmer-protests-in-the-EU.pdf.

Matuszak, S. (2021) The Breadbasket of the World? Agricultural Development in Ukraine. OSW Report, December 2021. https://www.osw.waw.pl/sites/default/files/OSW-Report_The-breadbasket-of-the-world_net.pdf.

Müller, D. Jungandreas, A., Koch, F.J. and Schierhorn, F. (2016) Impact of Climate Change on Wheat Production in Ukraine. Working paper. https://www.researchgate.net/publication/307569914_Impact_of_climate_change_on_wheat_production_in_Ukraine.

National Bank of Ukraine (2025) External Sector Statistics, https://bank.gov.ua/en/statistic/sector-external.

OECD (2025a) Agricultural Policy Monitoring and Evaluation 2025: Making the Most of the Trade and Environment Nexus in Agriculture, OECD Publishing, Paris, https://doi.org/10.1787/a80ac398-en.

OECD (2025b): OECD Data Explorer. Financial market. National currency per US dollar, http://data-explorer.oecd.org/s/1we.

Ortiz-Bobea, A., Ault, T.R., Carrillo, C.M., Chambers, R.G. and Lobell, D.B. (20921) Anthropogenic climate change has slowed global agricultural productivity growth. Nature Climate Change 11, https://doi.org/10.1038/s41558-021-01000-1.

Poutrymed (2024) Sweden: An outbreak of Salmonella Enteritidis with a probably link to imported eggs from Ukraine. November 11 2024, https://www.poultrymed.com/Poultrymed/Templates/showpage.asp?DBID=1&LNGID=1&TMID=178&FID=9025&PID=0&IID=90598.

Pryshchepa, K. (2024) Seeds of strife. International Politics and Society (IPS), March 1, 2024, https://www.ips-journal.eu/topics/economy-and-ecology/seeds-of-strife-7361/.

Régnier, E. and Catallo, A. (2024) The Ukrainian agricultural sector: an overview and challenges in light of possible European Union enlargement. IDDRI Study No. 3. https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Etude/202406-ST0324-ukraine%20EU.pdf.

Shumilova, O., Sukhodolov, A., Osadcha, N., Oreshchenko, A. and 25 co-authors (2025) Environmental effects of the Kakhovka Dam destruction by warfare in Ukraine. Science 387(6739), https://doi.org/10.1126/science.adn8655.

Sputnik International (2023) Ukraine's Accession to the EU Could Greatly Harm Bloc's Agriculture – Policy Deputy Minister. December 16 2023, https://sputnikglobe.com/20231216/ukraines-accession-to-eu-could-greatly-harm-blocs-agriculture--polish-deputy-minister-1115620296.html.

Statistics Poland (2025) Procurement and prices of agricultural prices. https://stat.gov.pl/en/topics/agriculture-forestry/agriculture/.

Strohschneider, P. (2024) Strategic Dialogue on the Future of EU Agriculture. https://agriculture.ec.europa.eu/document/download/171329ff-0f50-4fa5-946f-aea11032172e_en?filename=strategic-dialogue-report-2024_en.pdf.

Thompson, W., Smith G. and Elasri A. (2012) World Wheat Price Volatility: Selected Scenario Analyses, OECD Food, Agriculture and Fisheries Papers, No. 59, OECD Publishing, Paris. https://doi.org/10.1787/5k8zpt62fs32-en.

Ukhanova, I.O., Kovalov, A.I., Babiy, O.M., Hrinchenko, R.V. and Tarasova, K.I. (2025) Ukraine's fulfilment of EU accession requirements: Prospects for adaptation to the provisions of the Common Agricultural Policy (CAP). Economic Innovations 27(2), https://doi.org/10.31520/ei.2025.27.2(95).147-158.

Ukrainian Statistical Agency (2025). External Trade in Goods and Services (updated on 30.09.2025).

UNIDO (United Nations Industrial Development Organisation) (2024) Standards Compliance Analytics Report. Border Rejections in Major Global Markets: Ukraine. https://www.unido.org/sites/default/files/unido-publications/2025-04/Standards-Compliance-Analytics-Report-Border-Rejections-in-Major-Global-Markets-Ukraine.pdf.

USDA FAS (2022) Ukraine Agricultural Production and Trade: Factsheet – April 2022. https://www.fas.usda.gov/sites/default/files/2022-04/Ukraine-Factsheet-April2022.pdf.

USDA ERS (United States Department of Agriculture Economic Research Service) (2025). International Agricultural Productivity Database, https://www.ers.usda.gov/data-products/international-agricultural-productivity.

van Dijk, M., Morley, T., Rau, M.L. and Saghai, Y. (2021) A meta-analysis of projected global food demand and population at risk of hunger for the period 2010-2050. Nature Food 2, https://doi.org/10.1038/s43016-021-00322-9.

von Cramon-Taubadel, S. (2008) Ukraine. In: Anderson, K. and Swinnen, J. (eds.) Distortions to Agricultural Incentives in Europe's Transition Economies. The World Bank, Washington, D.C.

von Cramon-Taubadel, S. and Nivievskyi, O. (2023) Rebuilding Ukraine: The agricultural perspective, *EconPol Forum* 24(2), https://www.ifo.de/DocDL/econpol-forum-2023-2-cramon-taubadel-nivievskyi-agricultural-perspective.pdf.

von Cramon-Taubadel, S. and Nivievskyi, O. (2024) The effects of sugar imports from Ukraine on markets and stakeholders in the EU. Study prepared for the InfoZentrum Zuckerverwender (IZZ). Diskussionsbeitrag, No. 2403, University of Göttingen, Department of Agricultural Economics and Rural Development, https://www.econstor.eu/bitstream/10419/308055/1/1913018423.pdf.

von Cramon-Taubadel, S. and Raiser, M. (2006) The Quotas on Grain Exports in Ukraine: ineffective, inefficient, and non-transparent. Institute for Economic Research and Policy Consulting in Ukraine, and The World Bank Country Office Ukraine. https://documents1.worldbank.org/curated/en/365851468309268556/pdf/385960ENGLISH0UA0Wheat0quota01PUBLIC1.pdf.

Walther, S. and von Davier, Z. (2017) Competitive advantages and disadvantages of agriholdings and independent farms – a case study from Ukrainian arable production. International Journal of Agricultural Management 6(2), DOI: 10.5836/ijam/2017-06-62.

World Bank Group (2024) Priorities for agricultural support in Ukraine. Washington, DC: World Bank Group. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099062524074615884.

World Bank Group, Government of Ukraine, European Union and United Nations (2025) Ukraine: Fourth Rapid Damage and Needs Assessment (RDNA4): February 24 2022–December 2024. Washington, DC: World Bank Group. https://documents1.worldbank.org/curated/en/099022025114040022/pdf/P180174-ca39eccd-ea67-4bd8-b537-ff73a675a0a8.pdf.

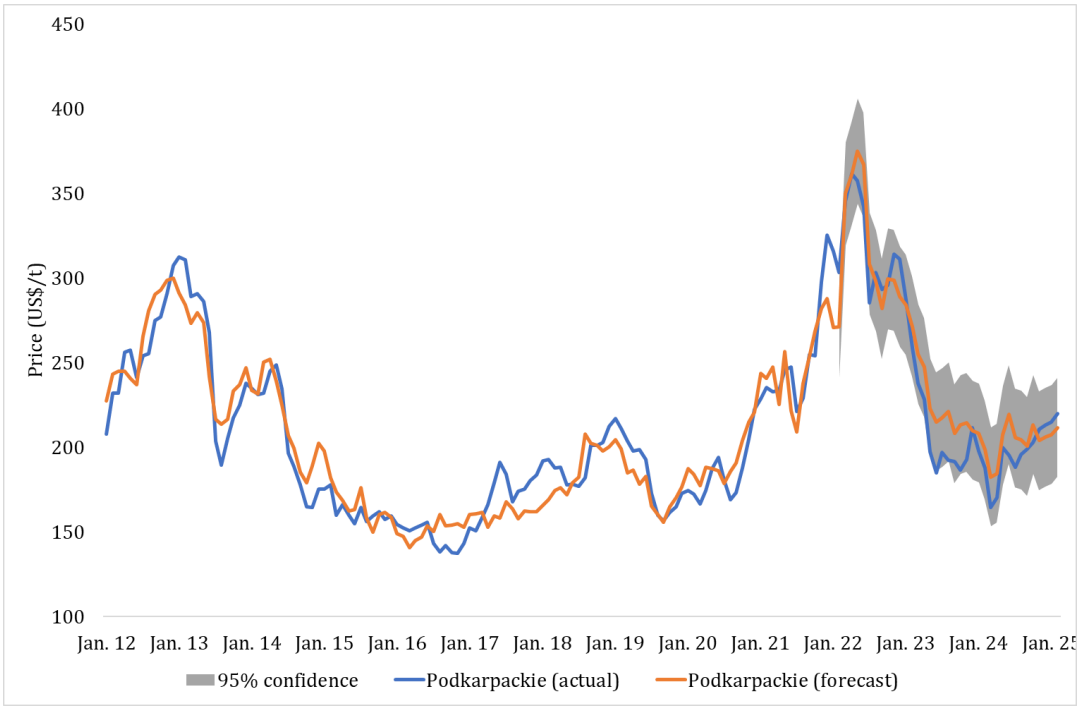
Woźniak, E., Tyczewska, A. and Twardowski, T (2021) A Shift Towards Biotechnology: Social Opinion in the EU. Trends in Biotechnology 39(3) https://doi.org/10.1016/j.tibtech.2020.08.001.

8. Appendices

Appendix Figure 1: Actual and forecast wheat prices in Lubelskie Voivodship, Poland, since February 2022

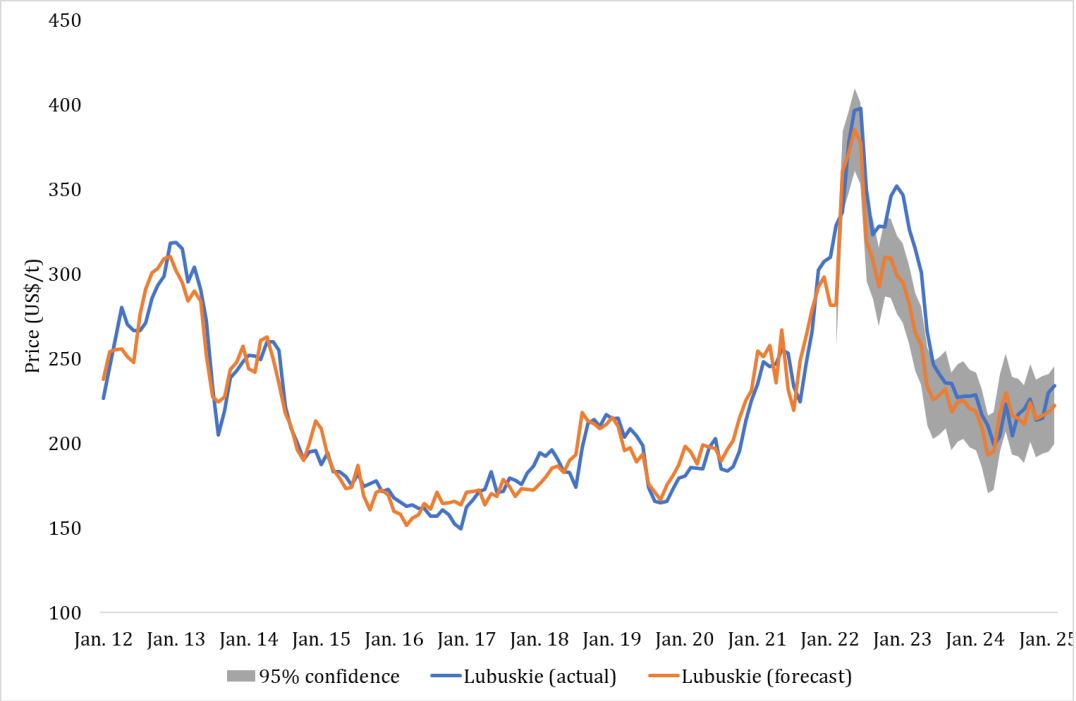
Source: Own calculations with prices in Złoty from Statistics Poland (2025) converted into US$ using OECD (2025b).

Appendix Figure 2: Actual and forecast wheat prices in Podkarpackie Voivodship, Poland, since February 2022



Source: Own calculations with prices in Złoty from Statistics Poland (2025) converted into US$ using OECD (2025b).

Appendix Figure 3: Actual and forecast wheat prices in Lubuskie Voivodship, Poland, since February 2022



Source: Own calculations with prices in Złoty from Statistics Poland (2025) converted into US$ using OECD (2025b).