Policy Paper

The Impact of Ukraine's Accession on the EU's Economy

The Value Added of Ukraine

| Tinatin Akhvlediani | Veronika Movchan |

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Cover page photo: "Let´s rebuild Ukraine together!" placard in Kyiv, Ukraine, 24 May 2023. Photo by Sergei SUPINSKY / AFP, Scanpix

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List of Abbreviations and Units of Measurement

AA	Association Agreement
ACAA	Agreement on Conformity Assessment and Acceptance of Industrial Products
AI	artificial intelligence
ATM	Autonomous Trade Measures
BaTIS	Best Available Techniques Information System
BSGI	Black Sea Grain Initiative
CAA	Common Aviation Area
CMU	Capital Markets Union
CO2	Carbon dioxide
DCFTA	Deep and Comprehensive Free Trade Area
ECMT	European Capacity Management Tool
EMIR	European markets infrastructure regulation
EURES	EURopean Employment Services
FAO	Food and Agriculture Organization
FDI	foreign direct investments
GATS	General Agreement on Trade in Services
GTS	Gas Transmission System
GWh	Gigawatt hours
ICT	Information Communications Technologies
kt	kilotonne
MiFID	markets in financial instruments directive
MiFIR	markets in financial instruments regulation
MIGA	Multilateral Investment Guarantee Agency
MFF	multiannual financial framework
MFN	most-favoured nation
NBU	National Bank of Ukraine
OECD	Organisation for Economic Co-operation and Development
RDNA	Rapid Damage and Needs Assessment
SEPA	Single European Payment Area
SPS	sanitary and phytosanitary measures
SURE	Reconstruction and Economy
sq km	square kilometre
t/ha	tonnes/hectare
TBT	technical barriers to trade
TEN-T	Trans-European Transport Network
TEU	twenty-foot equivalent unit
TFEU	Treaty on the Functioning of the European Union
TRQ	tariff rate quota
UNECE	United Nations Economic Commission for Europe
WTO	World Trade Organization

Introduction

Ukraine's integration into the EU economy is not as far into the future as it is sometimes deemed. Ukraine was interlinked with the EU economy before the full-scale Russian aggression, and these links have further broadened and strengthened since February 2022. It is reasonable to expect that by the time of Ukraine's accession, its penetration into the EU economy will be much more profound.

Ukraine was interlinked with the EU economy before the full-scale Russian aggression, and these links have further broadened and strengthened since February 2022

This study examines Ukraine's existing and potential economic impact on the EU's economy. The hypothesis is that the EU economy will absorb many benefits and shocks from closer integration with Ukraine before its accession.

The study is structured around the analysis of the following issues: 1) the current role of Ukraine in the EU economy, 2) what and when legal and institutional changes are forthcoming, and 3) how and when these changes will alter Ukraine's role in the EU's economy and what impact that will have. In addition to analysing general patterns, we undertook case studies in several sectors where Ukraine's impact is expected to be the most profound. These include agriculture, energy, transport, critical materials, green technologies, and investments.

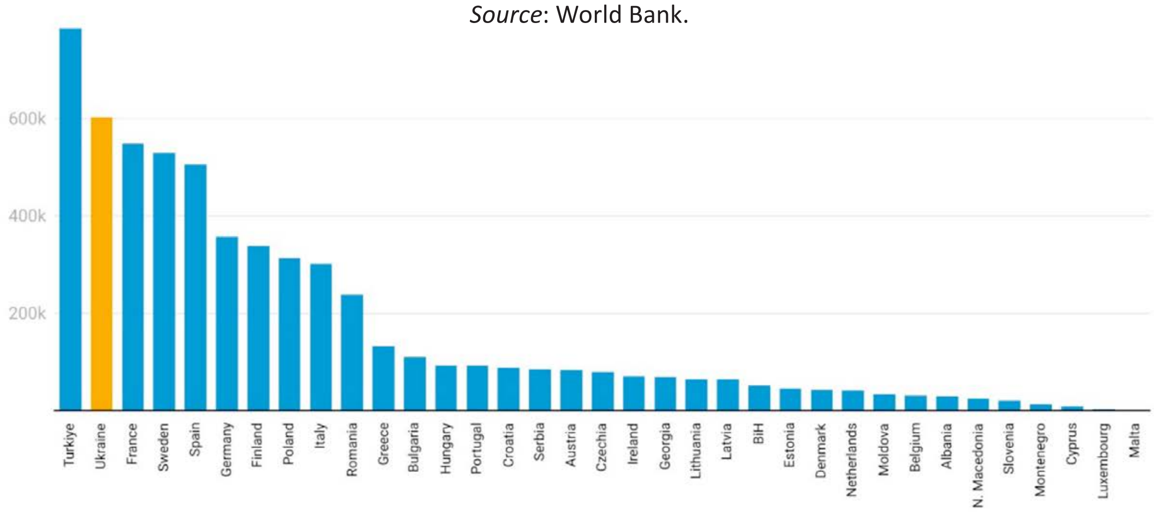
1. Ukraine's Economy Compared to the EU Member States and Candidates: Overview

Ukraine is a small open economy neighbouring the EU, with land borders with four EU Member States (Poland, Slovakia, Hungary, and Romania) and one candidate country (Moldova). Among Ukraine's distinctive characteristics is its surface area, which exceeds all current EU Member States and is the second-largest of any candidate country after Turkey.[1] Moreover, Ukraine has the most extensive area of arable land at 32 million hectares, compared to 20 million hectares in Turkey and 18 million in France.[2]

Ukraine remains among the leading European countries by population size. The World Bank estimated that Ukraine's population has decreased from 44 million persons in 2021 to

Figure 1. EU and EU Candidate and Potential Candidate Countries: Surface Area, sq km

Source: World Bank.



[1] As of December 2023, about 17% of Ukraine's territory is occupied by Russia. The government-controlled territory is approximately 501 000 sq km, which still makes Ukraine the fourth largest territory when compared to the EU Member States.

[2] According to estimates, the occupation deprived the country of access to about 15% of its arable land, so Ukraine currently controls about 28 million hectares.

Figure 2. EU and EU Candidate and Potential Candidate Countries: Population
Source: World Bank.

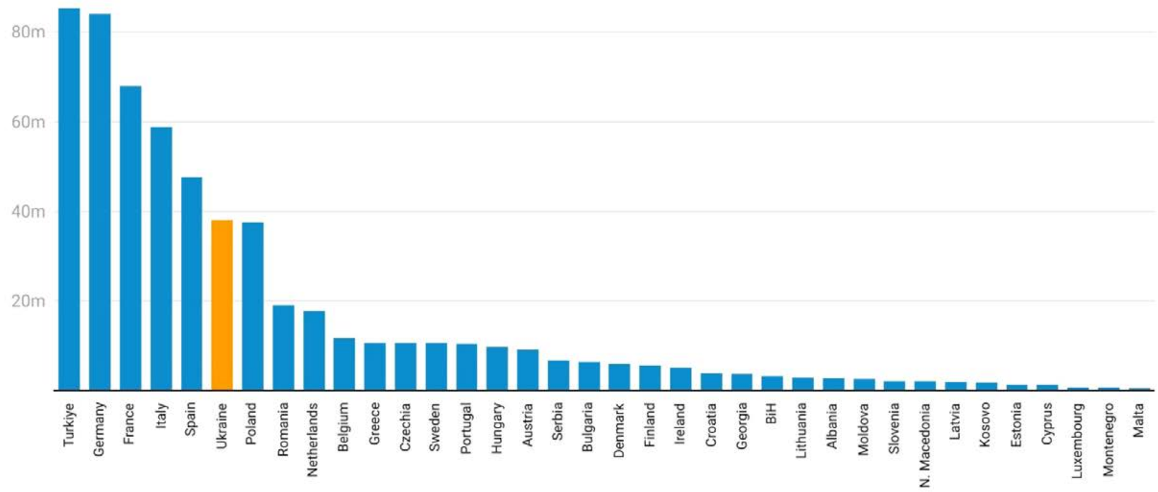
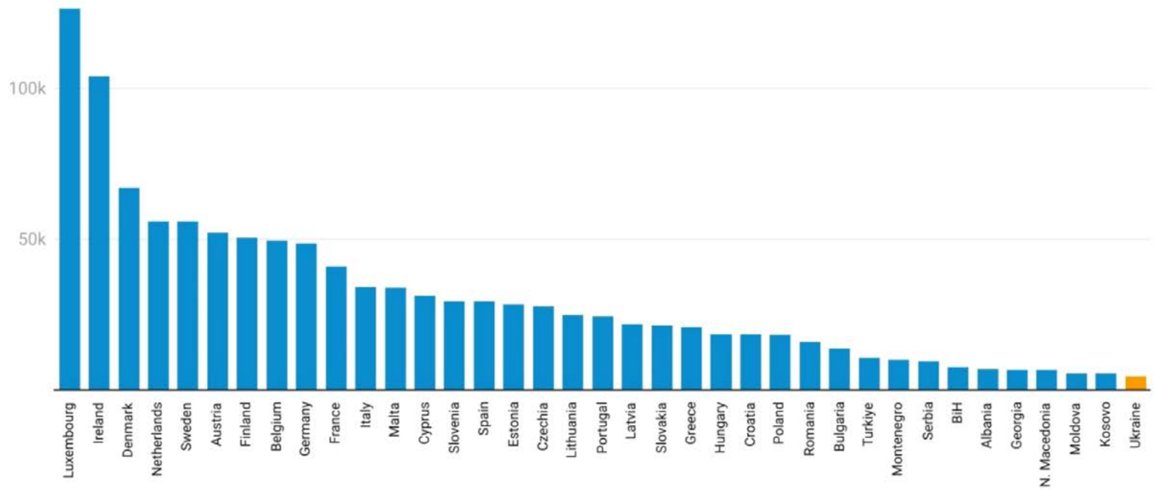


Figure 3. EU and EU Candidate and Potential Candidate Countries: GDP Per Capita in Current USD
Source: World Bank.



38 million in 2022 amid the disastrous impact of the full-scale Russian war of aggression. However, that still places Ukraine fifth after four EU Member States and second among candidate countries after Turkey. Even if more pessimistic estimates of Ukraine's current population are accepted (e.g., Ella Libanova, Director of the Institute of Demography and Social Research, estimates that Ukraine's population was less than 32 million at the beginning of 2023),[3] Ukraine's population would still be among the largest of the comparison countries, moving only one notch down to sixth place when compared to the current EU Member States.

At the same time, Ukraine is currently the poorest among EU Member States and EU candidate and potential candidate countries. In 2022, its GDP per capita was only USD 4 534 compared to the EU median of USD 24 275. Using GDP per capita at purchasing power parity (constant 2017 international USD) gives the same result: Ukraine ranks the lowest. Moreover, Ukraine ranked the lowest in 2021, i.e., before the full-scale war.

There are multiple reasons, both external and internal, for this weak performance even before the full-scale war. The key external factor was the 2014 Russian military aggression that resulted in the occupation of about 7% of Ukrainian territory, including Crimea and part of Donbas. This caused a loss of people, critical industrial assets and natural deposits, including in the Black Sea, and undermined the country's transport and transit potential, making territories closer to the frontline much less secure and thus less attractive for investors.

3 "Depopulation Is an Inevitable Scenario for Ukraine," *Interfax Ukraine*, 24 September 2023.

Figure 4. EU and EU Candidate and Potential Candidate Countries: Nominal GDP, USD Billions

Source: World Bank.

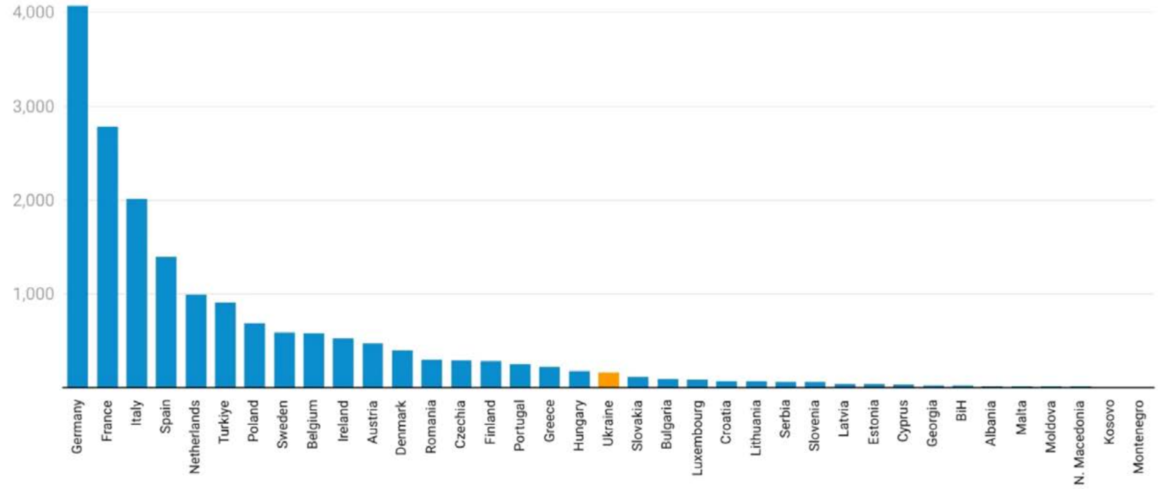
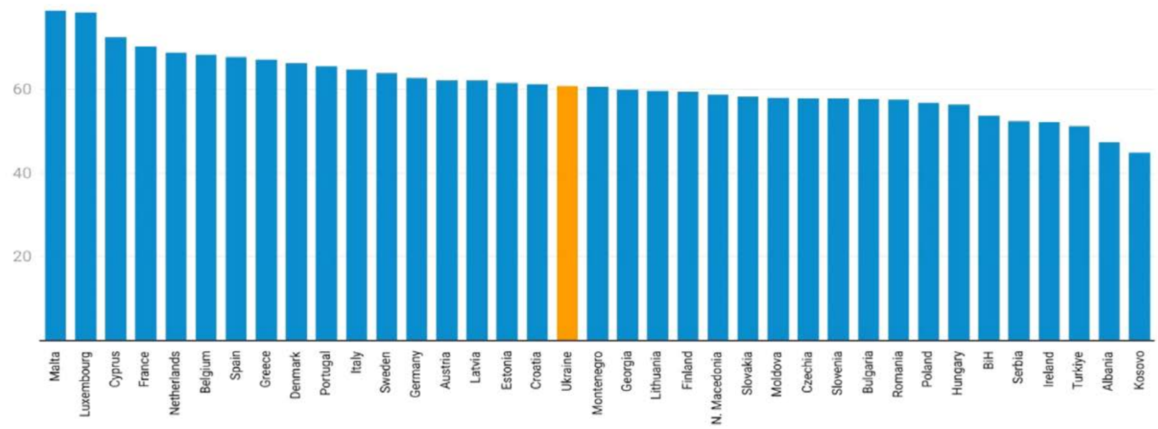


Figure 5. EU and EU Candidate and Potential Candidate Countries: Share of Services, % of GDP

Source: World Bank.



However, the role of internal factors is more striking. Among them, inadequacies in the rule of law resulting in the poor protection of property rights are likely the most important as they have truncated investments and innovations, undermining growth potential for years. Still, it is equally important to recognise the vast transformation and reforms that Ukraine has undergone over the past thirty years, especially since 2014. Ukraine is among the few European countries with no experience of modern statehood before 1991. As in other Soviet Union countries, private property was de facto prohibited in Ukraine, and entrepreneurship was criminalised. Ukraine has chosen a development path of democracy and market economy reforms rather than the Russian model of autocracy supported by rich energy and other natural resources. Ukraine's path has been extremely uneven, but the country has changed radically compared to its starting position.

Although inadequacies in the rule of law have truncated investments and innovations, it is important to recognise the vast transformation and reforms that Ukraine has undergone

Ukraine is among the few European countries with no experience of modern statehood before 1991 but has chosen a development path of democracy and market economy

In 2022, Ukraine's GDP amounted to USD 161 billion, putting the country between Hungary and Slovakia in the middle of the range. Structurally, over half of Ukraine's value-added has been generated by services. The share of services was 52% of GDP in 2021 and increased by nine percentage points to 61% in 2022 as

Figure 6. EU and EU Candidate and Potential Candidate Countries: Share of Industry and Construction, % of GDP. *Source*: World Bank.

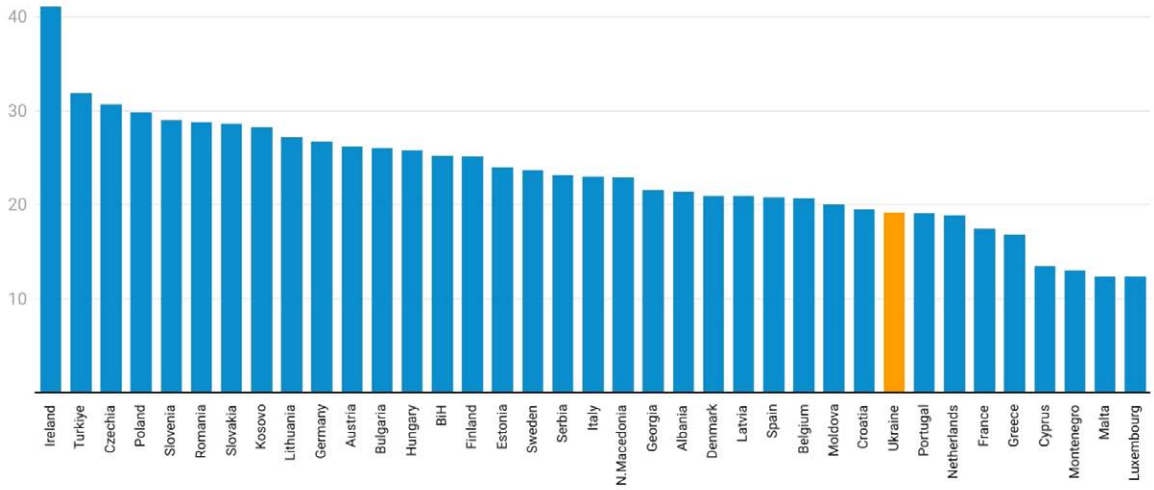
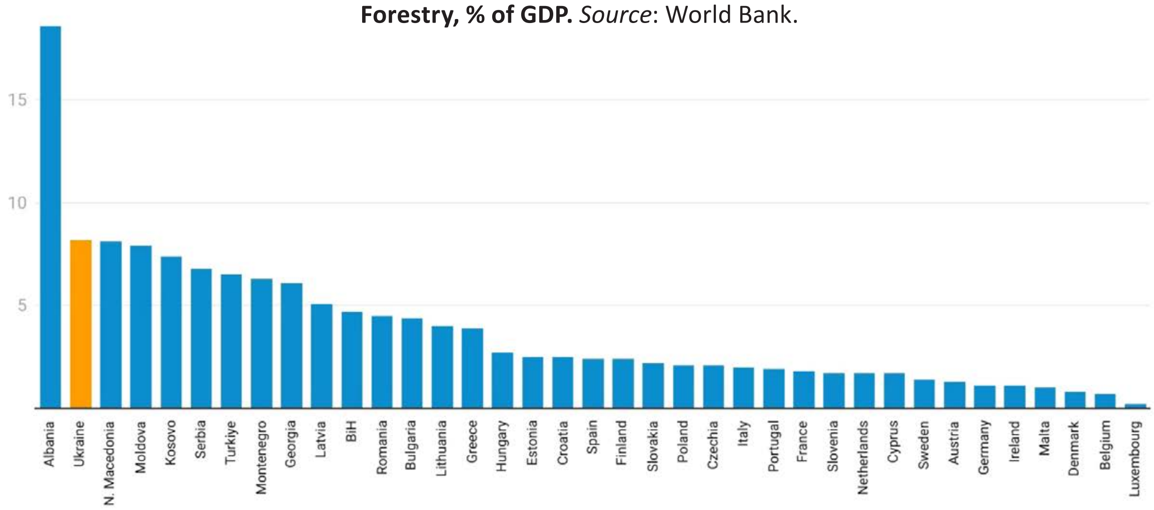


Figure 7. EU and EU Candidate and Potential Candidate Countries: Share of Agriculture, Fishery and Forestry, % of GDP. *Source*: World Bank.



the country has channelled over half of public spending into security and defence. The predominance of services has also been typical for all EU Member States.

What makes Ukraine's economic structure distinct from the EU are the comparative roles of agriculture and industry in the value added. In 2022, the industry and construction value added accounted for 19.2% of GDP, well below most of the EU Member States, candidates and potential candidates. The deindustrialisation of the Ukrainian economy has been a long-term trend as the enterprises inherited from the Soviet Union did not withstand the pressure of competition and the challenges of transformation. At the same time, new businesses tended to emerge predominantly in agriculture and services.

Agriculture has a higher share of GDP in Ukraine than in any EU Member State and the second highest share after Albania when the EU candidate and potential candidate countries are included in the comparison. This reflects Ukraine's long-standing potential in the sector arising from the country's vast, rich black soils and active investments in new technologies, which have seen it gradually catching up with average EU yields in agriculture.[4]

Ukraine is one of the largest countries in terms of its land size and population while being economically the poorest among EU Member States, candidates, and potential candidates

4 According to FAO, the 2021 maize yields were 7.6 t/ha in Ukraine compared to 7.9 t/ha in the EU (1996: 2.7 t/ha and 5.8 t/ha, respectively). For wheat, the 2021 yields were 4.5 t/ha in Ukraine and 5.7 t/ha in the EU (1996: 2.3 t/ha and 4.7 t/ha). For soya beans, the 2021 yields were 2.6 t/ha in Ukraine and 2.9 t/ha in the EU (1996: 0.9t/ha and 2.8 t/ha). For sunflower seed, Ukraine has already surpassed EU yields with 2.5 t/ha vs 2.4 t/ha in 2021 (1996: 1.0 t/ha in Ukraine and 1.5 t/ha in the EU).

Figure 8. The Structure of Ukraine's Value Added, % of GDP
Source: World Bank.

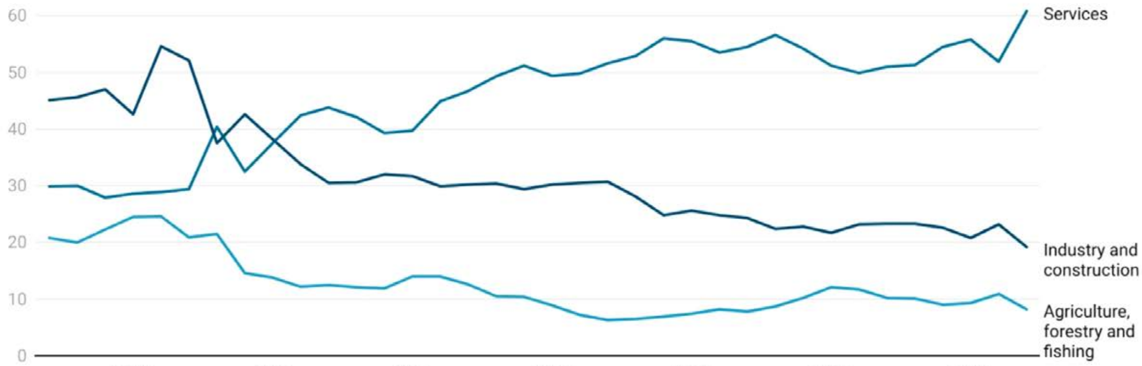
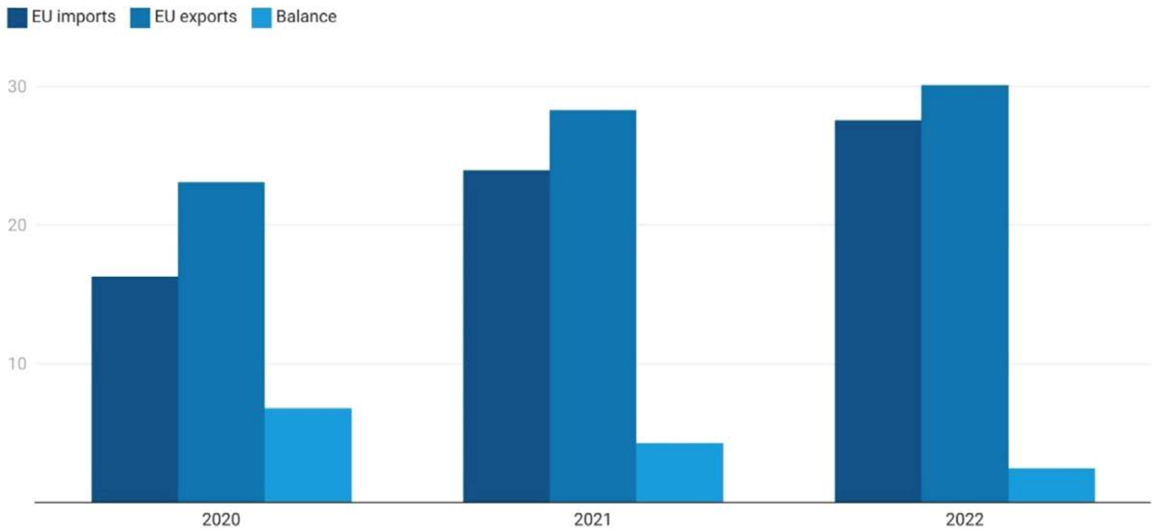


Figure 9. EU Trade in Goods with Ukraine, EUR Billions
Source: World Bank.



To sum up, Ukraine is one of the largest countries in terms of its land size and population while being economically the poorest among EU Member States, candidates, and potential candidates. As in the EU Member States, services dominate Ukraine's current economic structure. The difference is that agriculture plays a much more significant role in Ukraine's GDP than it does in the EU Member States.

2. Status Quo: The Current Role of Ukraine in the EU Economy

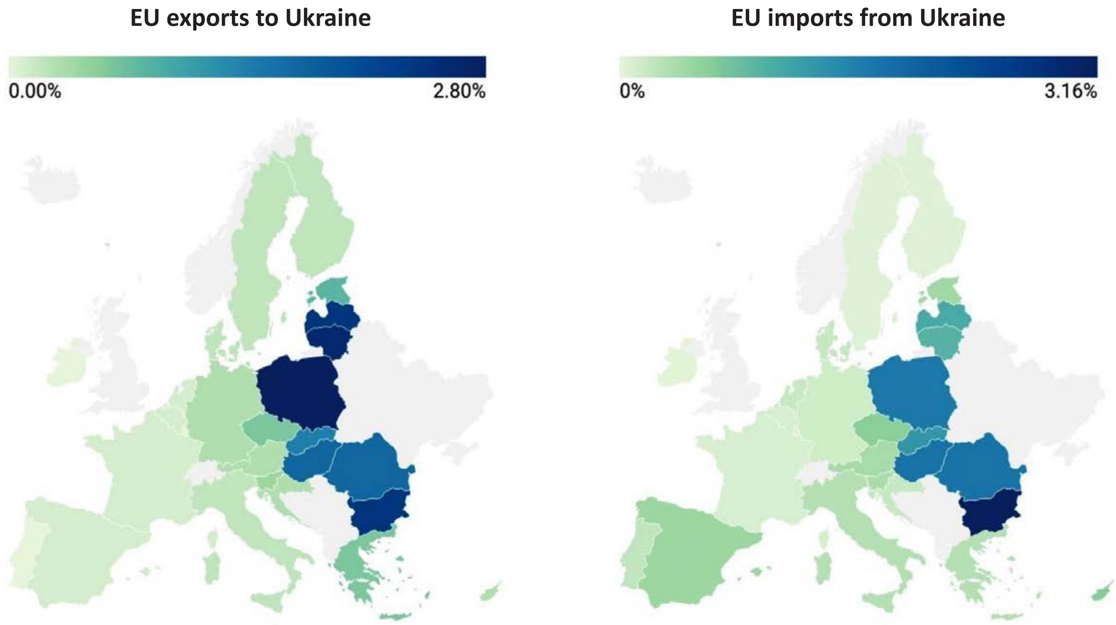
The role of Ukraine in the EU economy has been shallow, given the size and the level of economic complexity of its partners. However, there are notable cases where Ukraine's role is already strong and growing.

2.1. Ukraine as a Partner in Trade in Goods

For Ukraine, the EU has always been an important trade partner, a relationship that has intensified with Russia's full-scale war of aggression in Ukraine. In 2022, trade in goods with the EU exceeded half of Ukraine's total trade in goods, compared to a stable 40% share that had been the case for several years before. Still, Ukraine's role as an EU trade partner has remained minor.

In 2022, the EU exported EUR 30 billion to Ukraine and imported EUR 28 billion, preserving the trade surplus despite the Ukrainian economy's sharp contraction. The share of trade with Ukraine was less than one percentage point of the EU's total trade in 2022, almost unchanged compared to 2021.

Figure 10. Ukraine's Role in EU Merchandise Trade, 2022, % of Individual Countries' Totals
Source: Eurostat.



Between 2016 and 2021, the EU trade in goods with Ukraine almost doubled. Poland and Germany have been the largest exporters to Ukraine among the Member States since 2016, with Poland surpassing Germany in 2019 and maintaining its lead since then. Bulgaria has seen almost three-fold growth in goods exports to Ukraine, while Ireland, Spain, Latvia, Lithuania, Hungary, and Slovakia all more than doubled exports in 2016–21. In 2022, exports from neighbouring countries to Ukraine have further intensified. Poland and Italy were the largest importers from Ukraine in 2016–21, and again, as in the case of exports, Poland took the leading position in 2019. In 2022, Italy was pushed further down the list as Ukraine's neighbours became the key destinations for Ukrainian goods.

The role of Ukraine in the EU Member States' trade differs in terms of geography and specific product categories. Geographically speaking, Ukraine has traded more intensively with its neighbours. In 2022, exports to Ukraine accounted for a 2.8% share of Poland's total exports, the highest level among the EU Member States. The share of Lithuanian exports was larger (3.8%) in 2021, but that decreased as a result of the logistical problems that emerged after Belarus allowed Russia to use its territory to attack Ukraine. Other Member States had much lower shares. In terms of imports from Ukraine, the greatest Ukrainian share of an EU Member State's total imports was Bulgaria, with imports from Ukraine accounting for 3.2% of the country's total. With all other partners, the shares were lower, ranging from about 2% to almost zero in the cases of, for example, France or Ireland.

Ukraine is gradually becoming integrated into European value chains

Turning to specific products, Ukraine has always been active in supplying the EU with grains, mainly maize or corn, soybeans, sunflower seed oil, and some metal products. The Ukrainian share of the total imports of these products for selected partner countries would have reached up to a third. Ukraine has never been a major supplier of capital goods to the EU. However, Ukraine is gradually becoming integrated into European value chains, for example, by producing spare automobile parts in many factories built in western Ukraine, especially since 2014. However, Ukraine's principal product in this area — ignition wiring sets — has accounted for only a tiny proportion of the overall supply of car components within the EU.

Figure 11. EU Trade in Services with Ukraine, EUR Billions
Source: Eurostat.

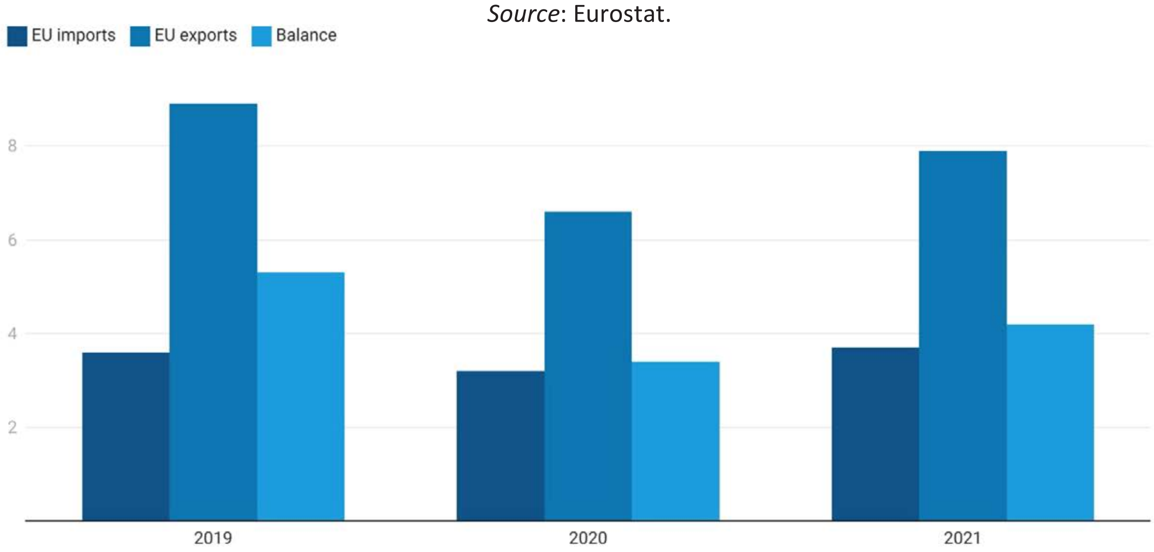
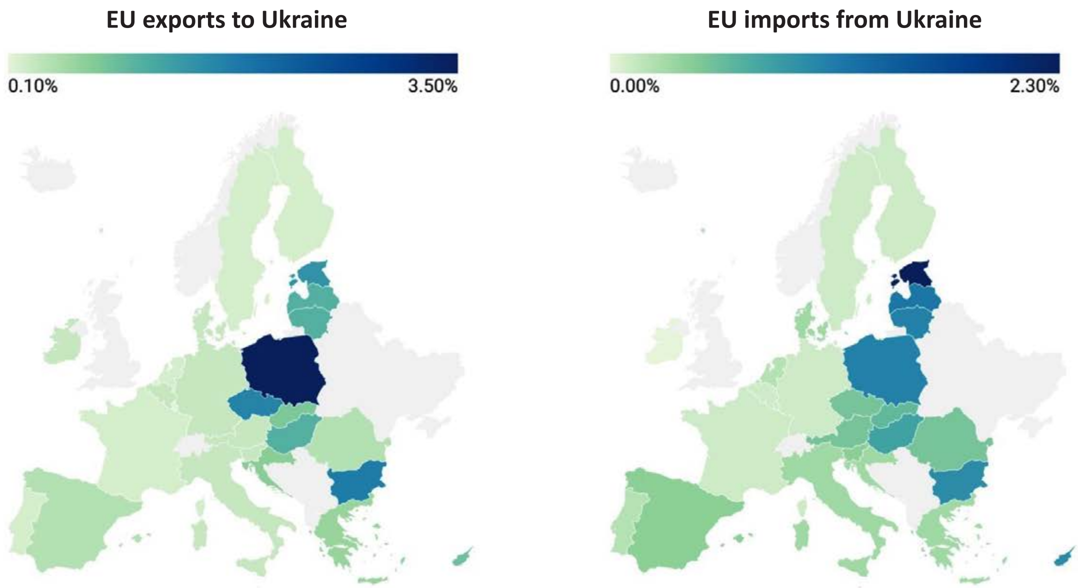


Figure 12. Ukraine's Role in the EU Trade in Services, 2021, % of Individual Countries' Totals
Source: Authors' calculations based on the BaTIS database.



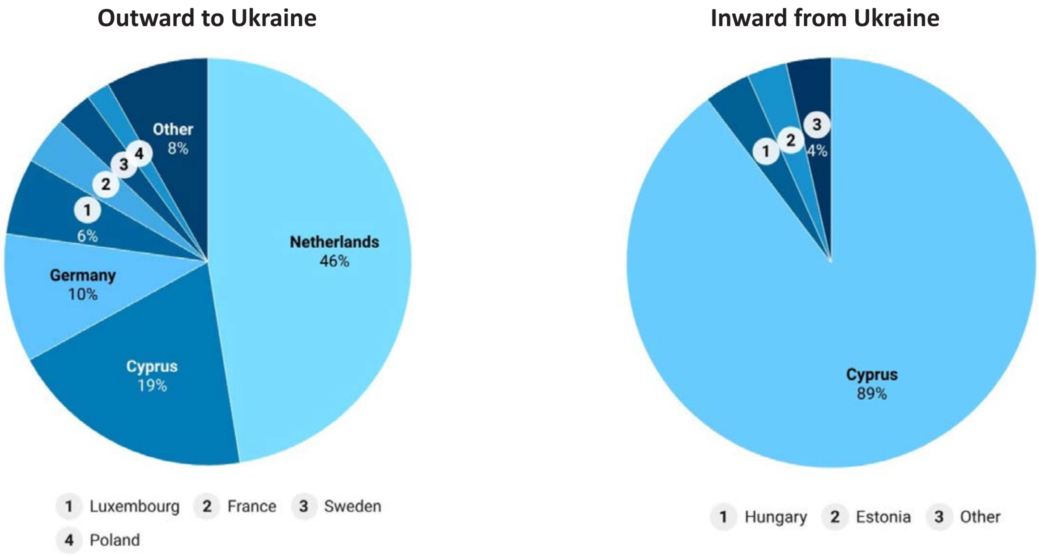
2.2. Ukraine as a Partner in Trade in Services[5]

A large EU trade surplus characterises services trade between Ukraine and the EU. Ukraine's share in the EU's external services trade is marginal, as in the case of trade in goods. Since the entry into force of the DCFTA, both exports and imports of services saw an increase of around 50%.

The major EU partners for services trade with Ukraine are Germany and Poland. The most significant growth in services imports from Ukraine has, since 2016, been in Estonia, which saw a seven-fold increase, Malta with a nearly four-fold rise, and Croatia, Lithuania, Luxemburg, Poland, and the Netherlands all recording around a two-fold increase. The largest growth in services exports to Ukraine has been from Ireland, which has shown a nearly six-fold increase since 2016, with Estonia recording a more than three-fold increase and Belgium, Croatia, Lithuania, and Cyprus all recording a greater than two-fold increase in 2016–21. In terms of sector, the largest sums of services trade for both imports and exports are in the category of commercial services.

[5] See Annex for further information.

Figure 13. EU Outward FDIs to Ukraine and Inward FDIs from Ukraine, 2021
Source: Eurostat.



As in the case of trade in goods, Ukraine is a minor partner of the EU for trade in services. Among the EU Member States, Poland has the largest share of exports to Ukraine at 3.5% of its total exports, followed by Bulgaria and Czechia. The main category of Polish exports of services to Ukraine in 2021 was travel (52% of the total), followed by transport (22%). With respect to imports, Ukraine is the most important partner for Estonia, with 2.3% of Estonia's total service imports coming from Ukraine. The largest categories of Estonian imports were ICT (41%) and transport (22%).

2.3. FDIs and Commercial Presence

Ukraine plays a minimal role as a destination and source of foreign direct investments (FDIs) for the EU. In 2021, the EU's outward stock of FDIs in Ukraine was EUR 29 billion or about 0.2% of the total. Notably, the Netherlands and Cyprus are the leading investors in Ukraine. At the same time, according to an analysis by the National Bank of Ukraine (NBU), it is through these two EU Member States that round-tripping transactions have been chiefly routed, signalling that at least a part of these FDIs is of Ukrainian origin.[6]

The EU is the largest investor in Ukraine, accounting for about three-quarters of the total inward stock. Apart from round-tripping transactions, the EU Member States have been used as a platform for multinational company investments in Ukraine.[7] Examples include ArcelorMittal, headquartered in Luxemburg, and a handful of companies registered in the Netherlands, such as COFCO International, the overseas agriculture platform for the largest Chinese state-owned enterprise, COFCO Corporation; DP World, a global logistics company; and several large US commodity companies (Bunge, Cargill, and Archer Daniels Midland). All the large mobile operators in Ukraine (Kyivstar, Vodafone, and Lifecell) are formally registered as Dutch FDIs, although their ultimate beneficiaries are in Russia, Azerbaijan, and Turkey.

The EU is the largest investor in Ukraine, accounting for about three-quarters of the total inward stock

Certain EU brands have also invested in Ukraine, including large retailers (Auchan, H&M, and IKEA) and manufacturing enterprises, including Danone, Leoni, Unilever, and Jacobs Douwe Egberts. Finance is another prominent

[6] National Bank of Ukraine, Statistics and Reporting Department, *Estimation of round tripping transactions for 2010-2022* (Kyiv: National Bank of Ukraine, 2023). Round tripping transactions involve funds from a resident entity being invested in an entity in a second economy that are then invested in another resident entity.

[7] For instance, a direct owner of the resident holding company Metinvest Holding LLC, a large metallurgical company in Ukraine, is Dutch special-purpose company Metinvest B.V., making it a Dutch FDI, although the final beneficiaries are Rinat Akhmetov and Vadym Novynskyi.

sector for EU investments, with several large EU banks active in the country, including Raiffaisen Bank, OTP Bank, and Credit Agricole. At the same time, the ban on foreign agricultural land purchases that is still in force — even after the moratorium on domestic agricultural land sales has ended — continues to deter FDIs in agriculture.

The total stock of Ukrainian inward FDIs in the EU was EUR 14 billion or 0.1% in 2021, channelled primarily through Cyprus, although this is only a front for investors from other countries. However, there have been investments in the EU by leading Ukrainian companies. Ukraine's metal producer MetInvest has plants in Italy.[8] MHP, one of Ukraine's leading agriculture and food industry companies, opened plants in the Netherlands and Slovakia, which has reduced the impact of the remaining trade barriers under the Association Agreement.[9] Roshen, a large confectionary producer, has factories in Lithuania and Hungary. Juice producer T.B. Fruit has two plants in Poland. Kormtech, a pet food producer, established a plant in Lithuania, while IMMER Group, specialising in packaging materials, started production in Latvia.

The Russian war of aggression against Ukraine fostered the penetration of the Ukrainian service business into the EU. Several large restaurant networks, such as Lviv Croissant and Chormorka, are active in Poland. Ukrainian discounter Avrora opened shops in Romania. The most prominent example of European expansion is Nova, a private postal company.[10] The company entered the EU market in late 2022 and, within a year, opened offices in Estonia, Latvia, Lithuania, Moldova, Germany, Poland, Romania, Slovakia, and Czechia.

2.4. People's Mobility

The EU had already become an essential destination for Ukrainian (seasonal) labour migration before 2022. The inflow of Ukrainian labour was fostered by the increased readiness of several EU Member States (Poland, Czechia, and Germany) to provide labour permits amid their labour shortages, the simplification of first entry to the EU thanks to the visa-free regime, and the reorientation of Ukraine's migrant flows from Russia to the EU after Russia's 2014 military aggression. According to estimates, there were around 3 million labour migrants from Ukraine before February 2022, with Poland as the prime destination (about 1.3 million requests to issue labour permits for Ukrainians were registered in 2020).[11] At the same time, the number of Ukrainians seeking asylum in the EU had remained low even after the 2014 Russian occupation of Crimea and Donbas, with most displaced people staying within Ukraine. With the full-scale war, however, migration from Ukraine to the EU increased dramatically.[12]

3. Accession to the EU's Single Market

The EU-Ukraine Association Agreement (AA) was signed in 2014. The pivotal component of the AA is the Agreement and Deep and Comprehensive Free Trade Area (DCFTA, Title IV of the AA), which has been provisionally in force since 2016. The DCFTA is aimed at enhancing economic and trade relations, leading to Ukraine's gradual integration into the EU's single market and supporting Ukraine's transition into a functioning market economy.[13] With its truly deep and comprehensive nature, the DCFTA and its implementation are the starting point for Ukraine's full integration into the EU's single market. The following sections review Ukraine's current standing regarding access to the EU's single market and map the gaps in its full access to the EU's so-called four freedoms: movement of goods, services, capital, and persons.

8 Andrii Glushchenko, "How Ukrainian Steel Industry Is Integrating into EU," *GMK Center*, 10 November 2023.

9 Oksana Pyrozhok, "Експорт заводів. Як українські компанії "пускають коріння" в Європі [Export of Plants: How Ukrainian Companies 'Put Down Roots' in Europe]," *Economichna Pravda*, 5 February 2019.

10 Nova is a new brand name of formerly Nova Poshta.

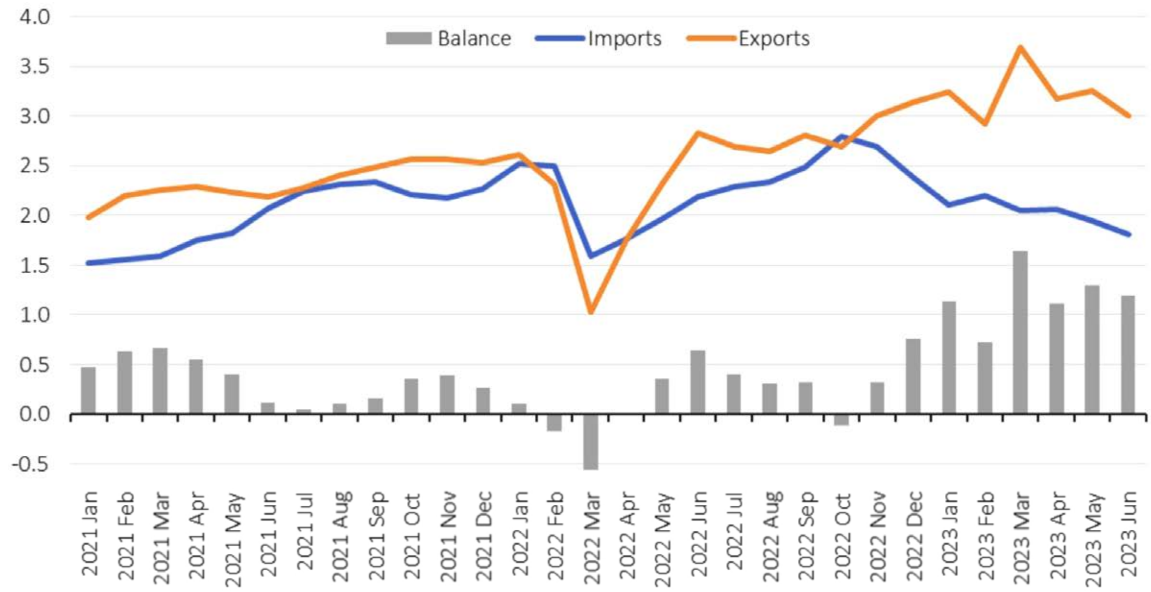
11 International Organization for Migration, *Migration in Ukraine: Facts and Figures 2021* (Kyiv: IOM Migration 2021).

12 Please refer to section 3.4. on the free movement of persons later in the paper.

13 European Union and its Member States, Ukraine, *ASSOCIATION AGREEMENT between the European Union and its Member States, of the one part, and Ukraine, of the other part* (Brussels, 2014), art. 1, para. 2(d).

Figure 14. EU Trade in Goods with Ukraine, 2021–23, EUR billions, Seasonally Adjusted

Source : Eurostat.[14]



3.1. Market Access for Goods

3.1.1. AA/DCFTA Provisions

The DCFTA has established a free-trade area for trade in goods over a transitional period of a maximum of 10 years up until 2026. The aim of the DCFTA is to eliminate 99.1% of duties by Ukraine and 98.1% by the EU. Foreseeing asymmetric tariff liberalisation, the transitional periods for removing barriers are shorter on the EU's side than on Ukraine's. However, full market liberalisation from the EU's side has already taken effect as a consequence of Russia's full-scale invasion of Ukraine. Whereby to support the Ukrainian economy and ease Ukrainian exports, the EU has temporarily opened its market for Ukrainian goods in full.

- **Industrial Goods**: Immediately after the launch of the DCFTA, the EU tariffs for industrial goods exported from Ukraine were removed for 94.7% of the tariff lines. For some goods, tariffs were eliminated after transition periods; these were as follows: minerals, 2019; chemicals, wood products, footwear, and copper products, 2021; fertilisers, aluminium articles, cars, and most motor vehicles, 2023. So, starting from 2024, the DCFTA foresees no industrial product duties on the EU side towards Ukraine.

  From Ukraine's side, immediate preferential treatment was granted to only 49.2% of the EU exports of industrial products. After a transitional period of seven years, the share of EU exports liberalised by Ukraine increased to 96%. For example, Ukraine applied a gradual liberalisation on several minerals (by 2023), organic chemicals (by 2019), fertilisers (by 2019), rubber tyres (by 2021), leather articles (by 2021), and textile products such as headgear (by 2019). The car sector secured particularly long transitional periods up until 2026.

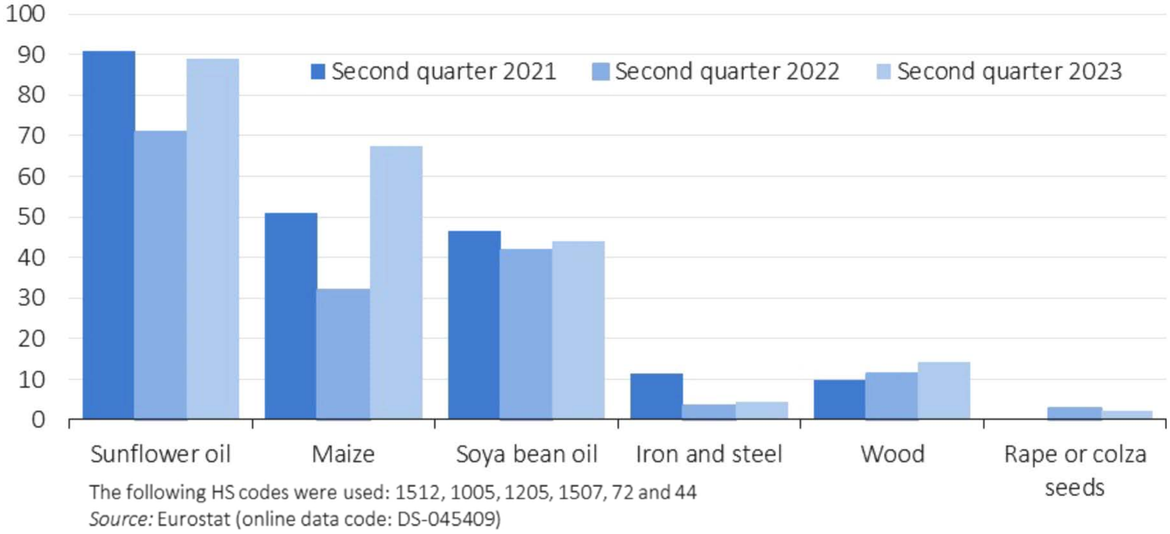
- **Agricultural Goods**: The EU has reduced agro-food tariffs in almost all categories. 82.2% of the relevant tariffs were nullified with the entry into force of the DCFTA, and 1.2% were reduced to zero in a transitional period of up to seven years. However, the EU applies entry price or tariff rate quotas (TRQs) for remaining tariff lines, including many of the most important items. The TRQs are used for grain, beef, pork, sheep and poultry meat, sugar, eggs, selected dairy products, selected vegetables, selected fruit juices, ethanol, and cigarettes. TRQs are managed by a principle of 'first come – first served' or through import licenses.

  Ukraine has eliminated around 88.5% of tariff lines on agricultural products. About 8.7% of agro-food tariffs are subject to

[14] Online data code: ext_st_eu27_2020sitc. "EU27 (from 2020) trade by SITC product group," Eurostat, last modified 15 January 2024.

Figure 15. Ukraine's Share in EU Imports for Selected Products, %

Source : Eurostat.[16]



limited linear reductions of 20–60% over 5–10 years (for example, dairy, eggs, sugar, animal oils, and fats). After this transitional period, a residual tariff remains. Moreover, TRQs are applied to 2.8% of agro-food tariff lines (including, for example, types of meat and sugar groups).

On 4 June 2022, the EU fully liberalised trade on imports from Ukraine under the so-called Autonomous Trade Measures (ATM) and reset this for another year on 5 June 2023. However, these ATMs had been phased out on wheat, maize, rapeseed imports, and sunflower seeds by September 2023. The Commission pointed out logistical bottlenecks, such as traffic lines and limited grain storage capacity ahead of the harvest season in the five Member States representing the entry gate for Ukrainian exports to the EU: Bulgaria, Hungary, Poland, Romania, and Slovakia.[15]

The full trade liberalisation under ATMs mainly served to sustain trade between the EU and Ukraine at the pre-war levels of 2021. The value of EU exports to Ukraine increased and further contributed to the EU's positive trade balance with Ukraine.

The elimination of all import duties, tariff rate quotas, and trade defence measures for imports from Ukraine did not cause any drastic changes in the import values of the major import categories from Ukraine. Imports of sunflower seed oil, maize, soya bean oil, wood, and rapeseed mostly returned to their pre-war levels. Additionally, there were no drastic changes in Ukraine's share of extra-EU imports. The most notable increase was in the import of maize, where Ukraine's share in extra-EU imports increased from 51% in the second quarter of 2021 to 67% for the same period in 2023.[17] Notably, the EU's most-favoured nation (MFN) import duty on maize is zero, so access to the EU market has hardly been changed by the elimination of the tariff rate.

The elimination of all import duties, tariff rate quotas, and trade defence measures for imports from Ukraine did not cause any drastic changes in the import values of the major import categories

3.1.2. Outlook for Ukraine's Full Accession to the EU's Single Market

The DCFTA foresaw the elimination of most duties on market access by 2026. However, as a consequence of Russia's full-scale invasion of Ukraine, the EU has already fully liberalised its market for Ukrainian goods under the ATMs. If the ATMs were to be suspended, the EU would

15 "EU Extends Trade Benefits for Ukraine," European Commission, 5 June 2023.

16 The following HS Codes were used 1512, 1005, 1205, 1507, 72, and 44; online data code: DS-045409. «International Trade,» Eurostat, accessed in February 2024.

17 "EU Trade with Ukraine – Latest Developments," Eurostat, last modified November 2023.

still be required to phase out residual duties to allow Ukraine full access to the single market. For industrial goods, this would imply cutting the residual 5.3% of the tariffs from the EU's side (under the current ATMs, all tariffs are suspended on imports from Ukraine until July 2024) and less than 1% from Ukraine's side.[18]

If the ATMs were to be suspended, the EU would still be required to phase out residual duties to allow Ukraine full access to the single market

That should have a boosting effect on the EU's exports of industrial goods, given that Ukraine will keep the aggregate demand for these goods, particularly after the war, including for the purposes of Ukraine's reconstruction and recovery.

For agricultural goods, full trade liberalisation would require removing the residual duties of around 16.6% tariff lines from the EU and 11.5% from Ukraine. Full integration into the EU's single market would also imply the removal of TRQs. Here, removing TRQs will have larger implications than removing tariff lines, as Ukraine is very competitive in agricultural produce covered by the TRQs, including grain (under the current ATMs, all tariffs are suspended on imports from Ukraine until July 2024).

The temporary full trade liberalisation on imports may affect the markets in several EU Member States that border Ukraine

However, Ukraine only accounts for around 1% of the EU's total trade in goods.[19] Consequently, the temporary full trade liberalisation on imports from Ukraine, granting it full access to the EU market, has not caused drastic changes in EU imports. However, it may affect the markets in several EU Member States that border Ukraine and provide entry gates for Ukraine to the EU's internal market. As already witnessed under ATMs, Bulgaria, Hungary, Poland, Romania, and Slovakia faced logistical hurdles such as road traffic and lack of storage capacity for agricultural produce from Ukraine. Another issue relates to the complaints and dissatisfaction of the local farmers in some EU countries that are not able to compete with Ukraine's efficiency with grain. This issue has already caused a ban on imports of several agricultural products from Ukraine that gave rise to politically sensitive disputes between Ukraine, Poland, Slovakia, and Hungary just before the Polish elections in October 2023. In December 2023, the newly appointed Polish agricultural minister of Donald Tusk's team suggested restricting access to the Polish market for Ukrainian agricultural producers for 20 years after the EU accession (i.e., presumably until 2050), highlighting the scope and political sensitivity of the issue.[20] Notably, such restrictions would entail significant tightening compared to the current DCFTA regime. These issues could be dealt with by introducing time-bound temporary measures on imports of selected products to certain countries until the right balance is found between the total economic efficiency and its distribution across consumers and producers in the EU Member States most affected. That balance needs to be found already now, not waiting for the accession process to be completed. After its current openness, it would be counterproductive to wait for the accession to close the market.

Ukraine's harmonisation has been proceeding, but without reaching the level of mutual recognition for most products

The non-tariff liberalisation, which entails the harmonisation of technical barriers to trade (TBT) and sanitary and phytosanitary measures (SPS) and mutual recognition, is expected to

[18] The estimate based on the Association Agreement tariff schedule for 2023 available at "Рівні ставок увізного мита України, які будуть застосовуватись у 2023 році до імпорту товарів походженням з ЄС в рамках вільної торгівлі між Україною та ЄС (довідкова інформація) [Levels of import duty rates of Ukraine, which will be applied in 2023 to the import of goods originating in the EU within the framework of free trade between Ukraine and the EU (reference information)], Ministry of Economy (Ukraine), accessed in February 2024.

[19] "Ukraine: EU Trade Relations with Ukraine. Facts, Figures and Latest Developments," European Commission, accessed in February 2024.

[20] "Polish Official Aims to Close Country's Agricultural Market for Ukraine for 20 Years After Its EU Accession," European Pravda, 17 December 2023.

Table 1. Reservations Concerning National Treatment or MFN for Establishment in Service Sectors

	EU party reservations		Ukrainian reservations
	EU-wide reservations	Member State-specific reservations*	
Horizontal reservations	3	22	0
Sectoral reservations	21	59	21
Total	**105**		**21**

Source: Emerson, Movchan, et al., CEPS.[21]

bring another boost to EU-Ukraine trade. So far, Ukraine's harmonisation has been proceeding, but without reaching the level of mutual recognition for most products. The exception to this is the EU's recognition of equivalence for cereal seeds that Ukraine secured in 2020.[22] Regarding products of animal origin, Ukraine's capacity to reach the EU market continues to rely on verification by individual establishments. For industrial products, the conclusion of the Agreement on Conformity Assessment and Acceptance of Industrial Products (ACAA) is expected.

Other aspects of non-tariff liberalisation relate to easing transporting routes and improving the access of Ukrainian goods to the EU's single market. The importance of easing such non-tariff barriers was illustrated by the Solidarity Lanes Initiative, which the EU put forward to improve Ukraine's access to European road and rail transport, without which Ukraine would not be able to maintain its exports to the EU market.[23]

3.2. Market Access for Services

3.2.1. AA/DCFTA Provisions

The DCFTA's provisions on services are organised under three headings: 1) establishment, 2) cross-border supply of services, and 3) temporary presence of natural persons for business purposes. The DCFTA provides national treatment and MFN treatment for services; however, several exceptions and reservations are in place.

For establishment, the EU keeps substantial EU-wide horizontal and sectoral reservations and Member State-specific reservations. The EU-wide reservations primarily concern economic activities considered public utilities or that may be subject to public monopolies. Member State-specific reservations cover the areas of agriculture and hunting, fishing, energy, mining, professional services, financial services, transport services, real estate purchases, and others. From Ukraine's side, there are no horizontal reservations, but sectoral reservations apply, particularly on land ownership. Ukraine also requires that service providers have Ukrainian nationality (e.g., for notary services, ownership of forests, or directing educational institutions), obtain a licence (e.g., for several postal activities), or meet professional qualification requirements according to Ukrainian legislation (e.g., for medical and dental services, or health-related and social services).

Cross-border supply of services (GATS Mode 1 and Mode 2) foresees market access and national treatment. But this does not apply to audio-visual services, national maritime cabotage, or domestic or international air transport services. Regarding the cross-border supply of services (GATS Mode 1 and Mode 2), the EU keeps nearly ten times more reservations than Ukraine (262 versus 28). These mainly concern business, financial, and transport services.

For the presence of natural persons for business purposes (Mode 4), there are provisions on some basic rules to tackle regulatory barriers to trade in those service sections where the partner countries have made specific commitments. So, to reiterate, the EU keeps extensive reservations, while Ukraine holds almost no reservations.

[21] Michael Emerson and Veronika Movchan (eds), Deepening EU–Ukrainian Relations: Updating and upgrading in the shadow of Covid-19 (Brussels: CEPS, 2021).

[22] "EU recognized Ukrainian seed certification," Crane IP, 1 November 2020.

[23] Please see further discussion on this in section 4.3. on transport.

Table 2. Reservations Concerning Market Access and National Treatment for Cross-Border Supply

	EU		Ukraine	
	Mode 1	Mode 2	Mode 1	Mode 2
Business services	79	23	4	0
Communication services	2	2	1	1
Construction and related engineering services	0	0	0	0
Distribution services	13	4	0	0
Educational services	11	8	0	0
Environmental services	1	0	0	0
Financial services	33	13	5	0
Health services and social services	3	1	2	0
Tourism and travel-related services	4	0	0	0
Recreational, cultural and sporting services	5	7	4	0
Transport services	25	11	8	0
Other services	2	2	3	0
Energy services	12	1	0	0
Total	**190**	**72**	**27**	**1**

Source: Compiled by the authors from Emerson, Movchan, et al. CEPS.

In the services sector, Ukraine's full membership in the EU's single market would require the EU to remove an extensive list of its existing reservations: more precisely, 105 reservations in establishment; 262 in cross-border supply; and 22 for contractual and independent professionals, totalling 387 reservations in all. In contrast, Ukraine would only need to lift around 50 reservations.[24]

In the services sector, Ukraine's full membership in the EU's single market would require the EU to remove an extensive list of its existing reservations

3.2.2. Outlook for Ukraine's Full Accession to the EU's Single Market

Full trade liberalisation in services should further ease services trade between Ukraine and the EU. It should have a considerably greater impact on Ukraine as the EU holds most of the reservations for full liberalisation. Considering that Ukraine's share in the EU's external services is marginal, the EU as a whole is unlikely to be impacted significantly.

Considering that Ukraine's share in the EU's external services is marginal, the EU as a whole is unlikely to be impacted significantly

Ukraine already saw 52% growth in its services exports to the EU in 2016–21. Germany and Poland are two primary destinations for Ukrainian service exports. The highest growth rates were for exports to Estonia, which saw a seven-fold increase, Malta with a nearly four-fold rise, and Croatia, Lithuania, Luxemburg, Poland, and the Netherlands, which all recorded around a two-fold increase since 2016. Broken down by sector, the largest sums of services trade mostly come from commercial services with Poland, Germany, Italy, the Netherlands, Spain, and France (see Annexes).

Germany and Poland, already the principal partners for Ukraine in services trade, will likely absorb more trade with Ukraine. Based on the most recent trade dynamics (see Figure 11), increases will likely remain high in services trade with Estonia, Malta, Ireland, Croatia, and Lithuania. Moreover, trade with these countries has steadily increased, so trade absorption capacity should be sustainable.

[24] Emerson and Movchan, *Deepening EU–Ukrainian Relations.*

3.3. Current Payments and Movement of Capital

3.3.1. AA/DCFTA Provisions

The DCFTA deals with current payments and capital movements, following IMF provisions for the free movement of capital and the currency convertibility of any payment and transfer affecting the current account of their balance of payments. The DCFTA commits the EU and Ukraine to ensure freedom of movement for direct investments and movement of capital and other transactions related to trade in services, the establishment of investors, and electronic commerce. The DCFTA is also committed to the facilitation and evolution of provisions to create the necessary conditions for further gradual application of EU rules on the free movement of capital.[25]
Ukraine is committed to completing the liberalisation of transactions on the capital and financial account of the balance of payments equivalent to the liberalisation in the EU for being granted internal market treatment in financial services.[26] By the end of the fifth year following the enforcement of the DCFTA, the Trade Committee is supposed to review the measures taken and determine the modalities for further liberalisation.

In light of reconstruction, bringing Ukraine in line with the EU's legislation and standards on the movement of capital would ease the EU's goals of helping make financial flows in Ukraine transparent and sustainable

3.3.2. Outlook for Ukraine's Full Accession to the EU's Single Market

The EU has seen major developments in its legislation and policies on the movement of capital and payments since the conclusion of the AA with Ukraine back in 2014. That includes launching the initiative to create the Capital Markets Union (CMU) in 2015.[27] Since then, the EU has put forward more than a dozen legislative proposals, major legislation revisions, and two CMU packages. This includes reviews of the markets in financial instruments regulation (MiFIR), the markets in financial instruments directive (MiFID II), and the European markets infrastructure regulation (EMIR).[28]
To this end, Ukraine's full integration into the EU's single market would extend Ukraine's commitments to aligning with the updated EU legislation and policies. Given the underdevelopment of Ukraine's financial sector and capital markets, legislative and policy alignment will serve as a solid foundation for financial deepening in the country. It will create risk-sharing arrangements with the EU, bilateral donors, and multilateral development institutions.[29]

In light of Ukraine's reconstruction, bringing Ukraine in line with the EU's legislation and standards on the movement of capital would ease the EU's goals of helping make financial flows in Ukraine transparent and sustainable. This would also increase the EU's influence and enhance its tools for monitoring capital flows with Ukraine.

In terms of payments, the free flow of payment will significantly ease doing business and conducting trade and commercial and non-commercial payments between Ukraine and the EU. This should involve Ukraine's accession to the EU's Single European Payment Area (SEPA), which should bring tangible benefits by cutting costs associated with transactions and payments between Ukraine and the EU.

Regarding the risks related to large outflows of capital from Ukraine, the Treaty on the Functioning of the European Union (TFEU) creates room for exceptional restrictions under Article 65, should this be necessary to control capital flows with Ukraine.[30] Article 65 was invoked during the European sovereign

25 EU-Ukraine Association Agreement, arts. 144–147.

26 EU-Ukraine Association Agreement, art. 4(3) of Annex XVII.

27 "Legislative Measures Taken So Far to Build a CMU," European Commission, accessed in February 2024.

28 "Capital Markets Union," European Council, Council of the European Union, accessed in February 2024.

29 Ralph De Haas and Alexander Pivovarsky, "The Reconstruction and Development of Ukraine's Financial Sector After the War," *European Bank for Reconstruction and Development Working Paper* No. 273 (December 2022).

30 "Free Movement of Capital," Fact Sheets on the European Union, European Parliament, October 2023.

debt crisis when Cyprus (2013) and Greece (2015) introduced capital controls to prevent excessive capital outflows. The opposite scenario is accounted for by the safeguard clause stipulated by Article 144 TFEU that allows the protective balance of payments measures within the framework of the balance of payments assistance programmes when the functioning of the internal market is jeopardised. This safeguard clause is only available to Member States outside the euro area. Ukraine would fall under this provision, as it would need several more years to be ready to join the European Economic and Monetary Union (EMU) following its accession to the EU.

Ukraine's accession to the euro area should occur sometime after accession and after the country's economy stabilisation in line with the euro area conditions: the so-called convergence criteria.[31] The EU Treaty does not provide a timetable for EU Member States to join the euro area, so Ukraine will have the flexibility to work on meeting the convergence criteria and join the euro area when it is ready.

3.4. Free Movement of Persons

3.4.1. AA/DCFTA Provisions

Free movement of persons implies the free movement of workers and persons within the EU's single market in line with the provisions of Article 45 of the TFEU.[32]

The AA and the DCFTA currently do not include provisions for the free movement of people. Free movement of persons is presently limited to the visa-free regime that allows Ukrainian citizens to move within the EU for up to six months throughout the year for short-term and non-work-related travel purposes. At the same time, workers' movement is missing from the existing frameworks. However, the EU's historic decision to trigger its Temporary Protection Directive and allow Ukrainian citizens following the outbreak of the war has effectively extended this freedom. This, in practice, has allowed Ukrainian citizens coming to the EU to be granted temporary residence permits and access medical treatment, employment, and education in the EU (the Temporary Protection Status for Ukrainian citizens is expected to be extended beyond its initial three-year time limit in March 2025). So far, more than 4 million Ukrainian citizens have utilised the temporary protection mechanism.[33]

The EU's historic decision to trigger its Temporary Protection Directive has effectively extended the freedom of movement to Ukrainian citizens

Germany and Poland have been the largest recipients of Ukrainian migrants in absolute numbers, hosting 1.17 and 0.96 million persons as of October 2023, respectively.[34] However, relative to the size of the population, Czechia comes top, having accepted almost 34 Ukrainians per thousand residents under a temporary protection scheme, followed by Estonia, Poland, and Bulgaria, which have each accepted around 26 per thousand, then Lithuania at 23 per thousand, and Slovakia at 21 per thousand.[35]

The profile of migrants fleeing from the war shows distinct patterns. According to the UNHCR Protection Profiling and Monitoring of Ukrainian Refugees conducted between October and December 2023, Ukrainian refugees have a relatively high level of education, with 53% of respondents having a bachelor's or higher degree and another 31% a vocational education.[36] About 73% were employed or self-employed back in Ukraine.

31 "Convergence Criteria for Joining," Economy and Finance, European Commission, accessed in February 2024.

32 European Union, "Article 45 (ex Article 39 TEC)" in *Consolidated version of the Treaty on the Functioning of the European Union Part Three - Union Policies And Internal Actions Title Iv - Free Movement Of Persons, Services And Capital Chapter 1 – Workers*, Document 12016E045 (Brussels: Official Journal of the European Union, 7 June 2016), 65-6.

33 By August 2023, Eurostat registered 4 082 095 beneficiaries of Temporary Protection with Ukrainian citizenship.

34 "Beneficiaries of Temporary Protection at the End of the Month by Citizenship, Age and Sex; Monthly Data," Eurostat, accessed in February 2024.

35 "Beneficiaries from Temporary Protection by Citizenship, per Thousand Persons," Eurostat, accessed in February 2024.

36 "Key Findings. Regional Protection Profiling. Monitoring. Protection Riska and Needs of Refugees from Ukraine," UNHCR via Operational Data Portal, last modified on 8 February 2024.

Figure 16. Ukrainians Benefiting from the Temporary Protection Scheme as of October 2023
Source : Eurostat.

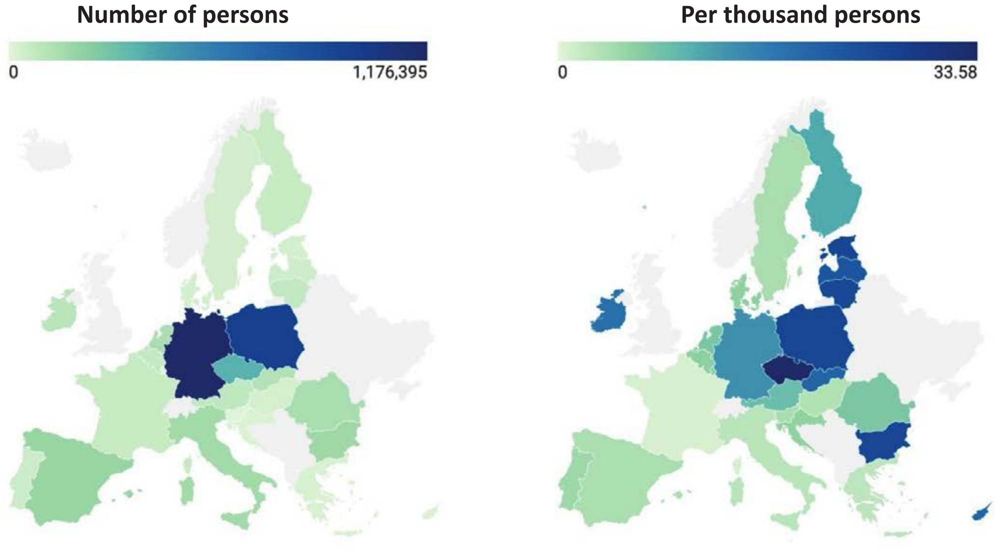
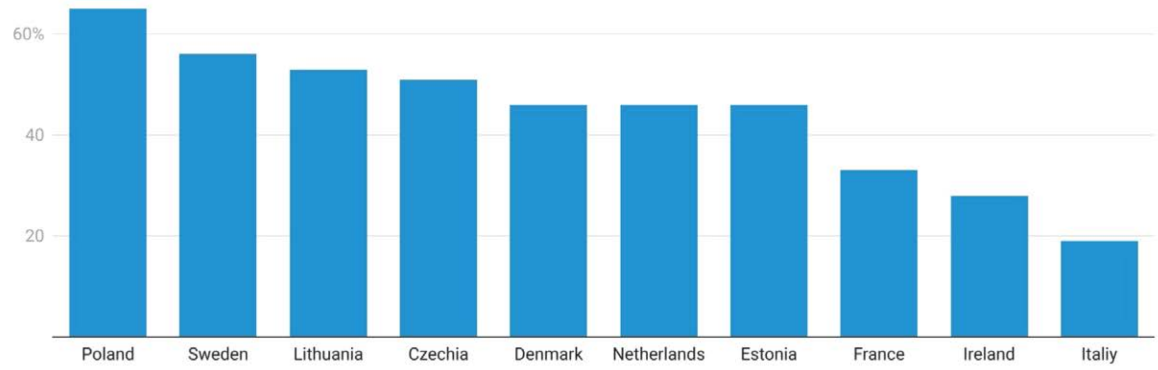


Figure 17. Estimated Employment Rates of Refugees from Ukraine, %
Source: OECD International Migration Outlook 2023.[38]



At the same time, only 27% of households are single or two adults with no dependents. In most cases, refugees must care for children (58% of the members of surveyed households) and the elderly (10%). That has affected employment opportunities in the EU. Among adults, the gender of emigrants has been predominantly female since men of age categories liable for military service are unable to leave the country.

The Organisation for Economic Co-operation and Development (OECD) analysis shows that employment outcomes are high.[37] The immediate access to the labour market granted under the Temporary Protection Directive, the relatively high education level, the previous active employment status, and existing diaspora networks have caused a rapid and widespread integration of Ukrainian refugees into the host countries' labour markets. Poland has had the highest level of integration, with almost two-thirds of working-aged refugees employed, followed by Sweden, Lithuania, and Czechia. However, the available data on the main sectors hiring Ukrainians indicates a significant downshifting in skills, with jobs in elementary occupations, cleaning, sales, etc., dominating. Still, there are also positive cases where Ukrainian immigrants have found employment in the Information Communications Technologies (ICT) and banking sectors.

[37] OECD, *International Migration Outlook* (Paris: OECD Publishing, 2023).

[38] OECD, *International Migration Outlook 2023*.

3.4.2. Outlook for Ukraine's Full Accession to the EU's Single Market

Ukraine's membership in the EU would allow the activation of the fourth freedom of movement — the movement of labour. However, as witnessed during the EU's enlargement in 2004, the EU Member States can impose temporary restrictions to protect their labour markets and constrain access to their social welfare. This is to avoid large outflows of labour from the acceding Member States in search of better-paid jobs and access to better social benefits. Back in 2004, 12 out of 15 Member States decided to introduce temporary restrictions on access to their labour markets. The temporary restrictions were introduced for eight out of ten acceding members (specifically, all new Member States except Malta and Cyprus, which had direct access to the free movement of labour).

Poland, having a population comparable to Ukraine, serves as a good example here. In 2004, most EU Member States introduced temporary restrictions to their labour markets for Polish workers lasting up to seven years. However, three countries, the UK, Ireland, and Sweden, allowed free access to their labour markets. This decision resulted in intensified labour migration from Poland to these three countries. Migration was comparable to other strong and large economies, such as Germany, where Polish workers were already present mostly for short-term seasonal jobs. However, contrary to expectations, labour mobility fell short of the absorption capacity of the receiving countries. The inflows of foreign workers complemented rather than replaced domestic labour, and consequently, wages remained stable in the receiving countries. Regarding age structure, most Polish migrants were young and healthy, contributing more to the receiving countries' budgets rather than benefitting from it. Given the relatively young age of migrants, interest in mobility mainly stemmed from labour opportunities rather than access to social welfare systems.

Perhaps the most likely destination for the Ukrainian workers would be Poland (as is the case now under the Temporary Protection Directive), where a large community of Ukrainians were already living before Russia's full-scale invasion of Ukraine. The proximity in geography, culture, and language offers further encouragement for Ukrainians to choose Poland as their destination. In terms of Poland's absorption capacity, the country should be able to absorb Ukrainian workers, given its low unemployment rates and need for workers in several sectors that are trending towards increasing growth. In 2022, Poland (after Czechia) was the country with the second lowest unemployment rate in the EU at 2.7%. This is compared to higher rates in both the EU-27 as a whole (6.1%) and the euro area (6.6%). In terms of labour demand in particular sectors, a survey conducted by Statistics Poland in 2021 shows that the most vacancies and new jobs were in industry (24.2% of available vacancies), construction (14.8% of available vacancies), and trade and repair of motor vehicles (11.8% of available vacancies).[39]

Perhaps the most likely destination for the Ukrainian workers would be Poland, a choice encouraged by the proximity in geography, culture, and language

Transitional periods would be an efficient tool to monitor labour mobility out of Ukraine and to serve Ukraine in avoiding shortages in its labour force

Another possible destination for Ukrainian workers is Germany (as is the case now under the Temporary Protection Directive), where Ukrainians are already the primary source of seasonal workers. Germany provides a large market with one of the lowest unemployment rates in the EU. Germany's labour demands could also absorb the high-skilled Ukrainian workers. As indicated by the International Placement Service, there is a considerable demand for doctors, nurses, engineers, scientists, computer scientists, childcare workers, drivers, chefs, and harvest workers. Ukrainian employees could fill the shortages in these sectors.

[39] "Labour Market Information: Poland," EURES, European Commission, 12 May 2023.

Overall, introducing transitional periods for a maximum of seven years to fully liberalise the labour movement could be an efficient tool with which to monitor labour mobility out of Ukraine. In Ukraine's case, this could be expected not only to serve as a protective mechanism for the labour markets of the EU Member States but also to serve Ukraine in avoiding shortages in its labour force, particularly given the resources needed for sustainable reconstruction and recovery of the country after the war. It is difficult to make precise predictions about Ukraine's population after the war ends and which sectors will have labour shortages in the EU when Ukraine becomes an EU member. However, it is clear that as long as Ukrainian workers fit the receiving countries' labour demands, they could fill the gaps in labour supplies and complement rather than replace local workers. Transitional periods should help avoid shocks or distortions in Ukraine's labour markets and the countries that receive Ukrainian workers.

However, the Temporary Protection Directive application, currently in place for 2022–25, and the presence of about 4 million Ukrainian refugees with full access to the EU labour market (in addition to the already existing Ukrainian diaspora and continued seasonal/cyclical migration), would override these usual labour market regulations for the time being. Given that many Ukrainian refugees have already become fully integrated into the EU labour market, their replacement — in the case of a mass return to Ukraine — could pose a challenge for the recipient countries. That may incentivise EU employers to ask for regular working permits for their employees, thereby changing their status as migrants and prolonging their stay.

4. The Effect of Ukraine's Integration on the EU Economy: Case Studies

4.1. Agriculture and Food Industry

With one of the largest world deposits of rich black soils and the increasing technological quality of its agricultural production, Ukraine has been among the key global players in grain and oil crops and a growing force in poultry production. Moreover, Ukraine has developed a large and quite diversified food industry. The production of vegetable and animal oils and fats, dominated by sunflower seed oil, is the largest manufacturing sector in the country, accounting for one-third of the manufacturing value-added. Implementing the AA/DCFTA generated further opportunities after Ukraine's producers started shifting to the EU safety standards and receiving verifications that have been adhered to in the EU and are familiar in other partner countries of Asia and Africa.

Ukraine is a significant competitor to the EU's agricultural producers. Notably, Ukraine's production compared to the EU total is exceptionally high for several products — most significantly sunflower seeds and soya beans (Ukraine's production of which exceeds the total production of the EU Member States) — and very high for maize, potatoes, and cabbage (of which Ukraine's output is close to half of what the EU Members States grow).

However, it is not apparent that Ukraine's agricultural production strength would/should be channelled towards conquering the EU market. Access to the EU market has been duty-free for most agriculture and food products since 2014, first in autonomous trade measures replicating the first year of the DCFTA and, since 2016, within the DCFTA.[40] Moreover, even the TRQs, except regarding wheat, have not been particularly limiting. Even in 2022, with a full (temporary) liberalisation and significant logistic bottlenecks redefining transport routes, except for a limited range of

[40] See section 3.1. on market access for goods.

Table 3. Ukraine's Production of the Main Agricultural Products Compared to the EU, 2021

Item	Unit	EU (2021)	UKR (2021)	EU + UKR	UKR share in the EU	UKR share in EU+UKR
Maize (corn)	million tons	73	42	115	**58%**	**37%**
Wheat	million tons	138	32	170	23%	19%
Potatoes	million tons	50	21	72	**42%**	**30%**
Sunflower seed	million tons	10	16	27	**158%**	**61%**
Hen eggs in shell, fresh	1000 eggs	117	15	132	13%	11%
Sugar beet	million tons	113	11	124	10%	9%
Barley	million tons	52	9	62	18%	15%
Raw milk of cattle	million tons	154	9	163	6%	5%
Soya beans	million tons	3	3	6	**129%**	**56%**
Rape or colza seed	million tons	17	3	20	17%	15%
Tomatoes	million tons	18	2	20	14%	12%
Cabbages	million tons	4	2	6	**42%**	**30%**

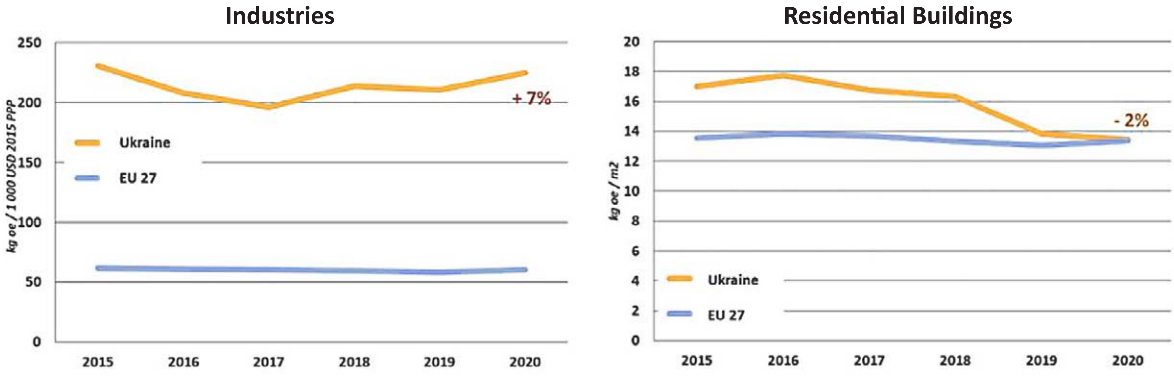
Source: FAO, Authors' estimates.

Table 4. Ukraine's Role in EU Agricultural Imports, 2020–22

Product label		European Union (EU 27)'s imports from Ukraine					
		USD m, 2020	USD m, 2021	USD m, 2022	Share in EU total, 2020	Share in EU total, 2021	Share in EU total, 2022
	All products	20,011	29,873	29,884	0.4%	0.5%	0.4%
	Agriculture and food	7,126	8,661	13,949	1.3%	1.4%	2.1%
'1512	Sunflower-seed oil	1,664	2,041	2,749	41.1%	37.8%	32.9%
'1005	Maize or corn	1,737	1,934	3,471	21.3%	19.7%	23.5%
'1205	Rape or colza seeds	1,084	1,496	1,646	17.0%	18.2%	15.7%
'2306	Oilcake and other solid residues	340	377	345	12.5%	12.1%	9.5%
'0811	Fruit and nuts	146	293	293	5.5%	9.0%	9.0%
'1201	Soya beans	221	282	490	3.1%	3.0%	5.2%
'1507	Soya-bean oil	137	228	274	14.8%	16.7%	16.4%
'0207	Meat and edible offal of poultry	169	188	346	2.3%	2.2%	3.2%
'1514	Rape, colza or mustard oil	45	150	64	1.7%	3.4%	1.2%
'0409	Natural honey	107	136	140	11.3%	12.3%	12.5%
'0802	Other nuts	88	111	78	1.2%	1.5%	1.1%
'2207	Undenatured ethyl alcohol	82	111	31	1.8%	2.2%	0.4%
'1905	Bread, pastry, cakes	75	94	83	0.5%	0.5%	0.4%
'1704	Sugar confectionery not containing cocoa	72	91	65	2.0%	2.2%	1.5%
'2304	Oilcake and other solid residues	79	91	119	0.9%	0.9%	1.0%
'1001	Wheat and meslin	161	87	933	2.2%	0.9%	8.1%

Source: ITC Trade Map, Authors' estimates.

Figure 18. Energy Intensity of Ukrainian and EU Industries and Residential Buildings
Source: UNECE.[41]



products, Ukraine's role in EU agriculture and food imports has remained relatively minor. The only product with a significant increase in its role in imports was wheat, the share of the total of which grew to 8% compared to less than 1% in 2021 and 2% in 2020.

With the individual bans on imports of a selected (growing) number of agriculture and food products from Ukraine imposed by Poland, Hungary, and Slovakia, it is apparent that the impact of Ukraine's agriculture on the EU will be at the top of the agenda for negotiations.[42] However, as discussed earlier in this paper (see section 3.1. on Market Access for Goods), the competitive pressure could be significantly eased by channelling all these products to the third markets, where Ukraine has traditionally found its primary consumers. This would make the EU a stronger player in the global food market.

The competitive pressure could be eased by channelling Ukraine's agriculture products to the third markets, which would also make the EU a stronger player

4.2. Energy and the Green Transition

Ukraine's energy sector has been one of the most challenging and simultaneously most promising sectors of the economy. On the one hand, Ukraine has abundant natural resources, including coal, oil, and gas deposits, as well as hydro and biomass potential.[43] The country also has a developed system of nuclear power stations, which, before the war, supplied about half of Ukraine's electricity. On the other hand, Ukraine has remained much less energy efficient than the EU. According to the United Nations Economic Commission for Europe (UNECE) assessments based on the International Energy Agency, Eurostat and Ukrstat data, Ukraine's energy intensity in industry is more than four times above the EU's average level. However, Ukraine has reached the EU level of energy intensity for residential buildings.

Moreover, Ukraine is a significant CO2 emitter in Europe. In 2020, Ukraine generated 166 million tons of CO2, seventh among EU Member States and candidate and potential candidate countries. Moreover, Ukraine is highly energy intensive, exceeding the EU's CO2 intensity by threefold.[44] This has created challenges but, at

Ukraine is highly energy intensive, which has created challenges but, at the same time, is an area with vast potential for improvement

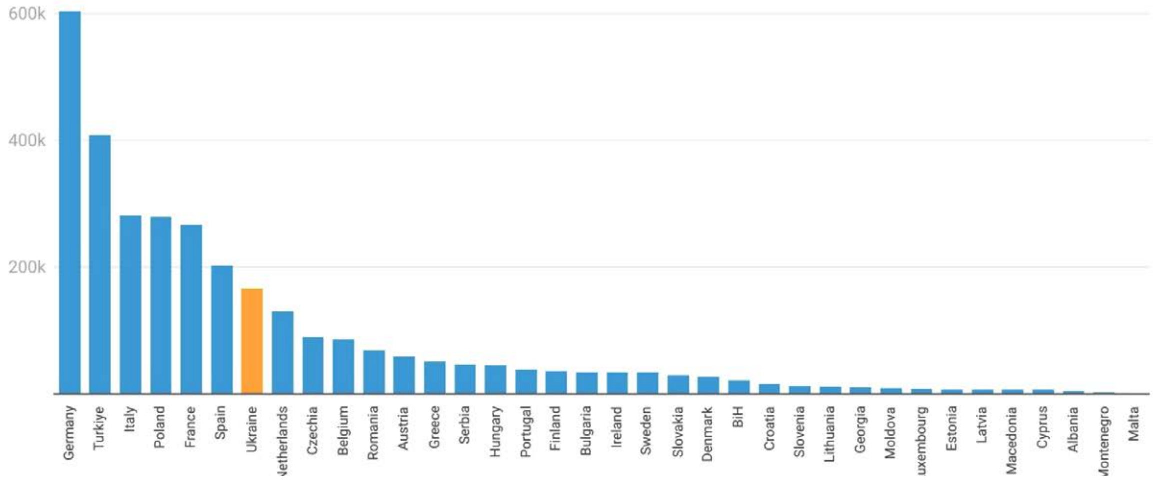
[41] UNECE, *Rebuilding Ukraine with a Resilient, Carbon-Neutral Energy System* (Geneva: United Nations, 2023).

[42] Poland and Hungary immediately introduced the ban on a longer list than the four products restricted by the EU's exceptional measures, see "Ukraine initiates WTO dispute complaints against Hungary, Poland and Slovak Republic," World Trade Organization, 21 September 2023. Slovakia expanded the list later on, see "Slovakia Extends and Indefinitely Prolongs Ban on Import of Agricultural Products from Ukraine," *European Pravda*, 29 November 2023.

[43] "Ukraine Energy Profile", IEA, https://www.iea.org/reports/ukraine-energy-profile.

[44] UNECE, *Rebuilding Ukraine.*

Figure 19. CO2 Emissions, 2020, kt
Source: World Bank.



the same time, is an area with vast potential for improvement.

One area of potential is the development of renewables, which was growing rapidly before the full-scale war. Renewables accounted for 5.3% of Ukraine's electricity generation in 2015, increasing to 11.8% in 2020, mainly thanks to solar and wind energy. Ukraine also had a system of large hydropower stations, which made stable contributions to green energy outputs. The war has caused the loss of many assets in this sector, with the explosion of the Kakhovka Dam probably causing the greatest damage. However, the sector has already started to recover. According to the Ukrainian Wind Energy Association, in 2022–23, three wind power plants with a total capacity of over 200 MW were built and launched in Ukraine. However, this is only partial compensation for the loss of 1.3 GW of wind-generated energy due to occupation.[45]

Renewable energy development is expected to be supported by Ukraine's accession to the ENTSO-E, part of the EU-Ukraine AA roadmap, which happened earlier than planned through the emergency mode in March 2022 and was fully completed only in November 2023. ENTSO-E ensures grid connections with the EU. Hydrogen offers another opportunity for Ukraine to contribute to the EU's Green Transition. In 2020, the Institute of Renewable Energy of the National Academy of Sciences of Ukraine released the Atlas of the Energy Potential of Renewable Energy Sources of Ukraine, estimating the potential green hydrogen production to be almost 45 000 tons per year.[46] The most promising regions for green hydrogen production are mainly located in the southeast of Ukraine (Odesa, Kherson, Zaporizhzhia, Dnipropetrovsk, and Luhansk oblasts, of which several are currently suffering Russian occupation). In 2021, several hydrocarbon-related initiatives were signed. The Ukrainian GTS Operator, the Slovak EUSTREAM, the Czech NET4GAS, and the German OGE of gas transmission system operators stated that the aim is to create a Central European hydrogen corridor, which would run from promising hydrogen generation sites in Ukraine to the EU.[47] The corridor's planned capacity was 120 GWh per day. Naftogaz and Ukrainian energy company

Gas transmission system operators aim to create a Central European hydrogen corridor, which would run from promising hydrogen generation sites in Ukraine to the EU

[45] Oleksandr Ivanov, "Найбільше постраждав і побудував Ахметов. Що відбувається з вітряною енергетикою під кінець другого року війни [Akhmetov Faces Major Losses and Builds: The State of Wind Energy as the War Enters Its Second Year]," *NV Biznes*, 15 December 2023.

[46] National Academy of Sciences of Ukraine, *Atlas of Energy Potential of Renewable Energy Sources Of Ukraine* (Kyiv: National Academy of Sciences of Ukraine, 2020).

[47] "Компанії газового сектору представляють Центрально-Європейський водневий коридор [Gas Sector Companies Present the Central European Hydrogen Corridor]," UA Transmission System Operator, 23 September 2021.

Eco-Optima joined the H2EU + Store initiative.[48] They signed a letter of intent with several German and Austrian gas companies, which provided for the production, storage, and transportation of green hydrogen to the EU, primarily to Germany and Austria. Initially, the plan was to store and transport the hydrogen mixed with natural gas and then move on to transporting and storing pure green hydrogen.

Yet another possibility for cooperation that is already being exploited is to utilise Ukraine's gas storage system. The country's underground natural gas storage capacity ranks in the top five in the world. The Ukrainian gas system includes twelve extensive storage facilities with a total capacity of around 31 billion cm compared to the EU's overall gas storage capacity of about 100 billion cm.[49] About 80% of the storage is in western Ukraine. It is estimated that Ukraine can provide the EU with about 10 billion cm of spare storage.

4.3. Transport

The EU-Ukraine Association Agreement envisages the opportunity for deeper integration of Ukraine's transport services into the EU single market. After legal and institutional alignment was completed, an internal market treatment regime was committed for international maritime transportation. For aviation, the Common Aviation Area (CAA) Agreement, finally signed in 2021, is considered an integration instrument. The next step would be to sign special agreements for railways, road transportation, and inland waterways.

The EU-Ukraine Association Agreement envisages deeper integration of Ukraine's transport services into the EU single market

In May 2022, the European Commission launched the Solidarity Lanes Initiative, aiming to provide Ukraine with broader access to the European road and rail transport market to export primarily agricultural products and deliver other necessary goods, including humanitarian aid, animal feed, and fertilisers. In particular, to speed up exports from Ukraine, it envisages the provision of additional rolling stock by EU Member States in 2019, the provision of railway slots for the export of agricultural products from Ukraine, the acceleration of customs procedures, and the provision of warehouses in EU Member States for product storage.[50] Moreover, Ukraine was formally included in the Trans-European Transport Network (TEN-T) expansion plans.

Ukraine's role and links with the EU transport system vary depending on the sector.

- **Rail:** The territory of Ukraine contains three railway transport corridors — Nos. 3, 5 and 9. The Ukrainian ports of Izmail and Reni interact with Pan-European Corridor No. 7, which passes the Danube.[51] As of 2021, Ukraine's railway network was about 19 800 km long (excluding the temporarily occupied territories), of which 47% of routes were electrified.[52] That places Ukraine third after Germany (39 800 km) and France (27 000 km) by the total length of the railway network and slightly ahead of Poland (19 300 km). However, the density of railway lines in Ukraine is considerably lower than in the EU, and network coverage is uneven across the oblasts. One of the most significant issues facing connecting the EU and Ukraine railway networks is the use of

The most significant issues facing connecting the EU and Ukraine railway networks is the use of different track gauges in Ukraine and its neighbouring EU Member States

[48] "Нафтогаз підписав меморандум про реалізацію проекту «H2EU+Store» з виробництва «зеленого» водню в Україні та його постачання до Німеччини [Naftogaz Signed a Memorandum on the Implementation of the 'H2EU+Store' Project for the Production of 'Green' Hydrogen in Ukraine and Its Supply to Germany]," Naftogaz, 26 November 2021.

[49] Thomas Laffitte and Ihor Moshenets, *Synchronized: The Impact of the War on Ukraine's Energy Landscape* (Philadelphia: Foreign Policy Research Institute, 2023).

[50] European Commission, *Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions An action plan for EU-Ukraine Solidarity Lanes to facilitate Ukraine's agricultural export and bilateral trade with the EU*, COM(2022) 217 final (Brussels: European Commission, 12 May 2022).

[51] "Інформація про Українські залізниці [General information about railway transport]," Ministry for Restoration (Ukraine), accessed in February 2024.

[52] "General information about railway transport," Ministry for Restoration (Ukraine).

different track gauges in Ukraine and its neighbouring EU Member States.

In September 2022, Ukrzaliznytsia, the state-owned railway company, and Deutsche Bahn signed a memorandum of understanding, which provides for support and cooperation in international freight transportation between the companies, in particular, in the introduction of European standards in railway management, the expansion of railway freight transportation corridors, and increases in terminal capacity.[53]

- **Road:** In 2021, road freight transportation accounted for 41% of shipped cargo in tons. Road transportation has played an essential role in trade with the EU, especially in imports. However, until mid-2022, the volume of international road transport of goods was constrained by transportation quotas established by individual EU countries, primarily Poland, at a level below the demand from Ukrainian carriers. The number of permitted trips by Ukrainian road carriers through the territory of Poland was even lowered from 200 000 in 2017–18 to 160 000 in 2019–21.[54] At the same time, the demand for trucking between Ukraine and the EU was growing. As a result, in 2021, Ukraine introduced rationing of road permits that restricted the number of monthly transportation per truck to/through the territory of Poland, the Netherlands, Spain, France, Hungary, Austria, Denmark, Italy, Romania, and Finland. This move allowed more logistic firms to stay in business.

  One of the key achievements of the Solidarity Lanes Initiative was the conclusion of the so-called road agreement, temporarily removing bilateral transport permits for Ukrainian cargo carriers and thus providing them with liberalised access to the EU market. That has helped to ease the logistic constraints that Ukraine has been facing but backlashed in late 2023. Polish carriers started the blockade of several important border crossing points on 6 November 2023, and Slovak and Hungarian carriers joined the protests in December 2023. As of 10 January 2024, this blockade has continued, primarily harming Ukrainian imports, including military and related goods. This blockade is contrary to EU law and the objectives of the accession process and should be ended.

- **Seaports**: Ukraine's port system has 18 seaports, 13 of which are located on the continental territory of Ukraine, including two in the Azov Sea and five ports in Crimea. Before the full-scale war, most cargo was processed in four Black Sea ports: 34% at Pivdennyi, 21% at Mykolayiv, 16% at Chornomorsk, and 15% at Odesa. In 2021, Ukrainian ports processed 153 million tons of cargo.[55] For comparison, in 2020, Turkey processed 491 million tons, and neighbouring Romania processed 47 million tons.[56] Notably, the load of Ukrainian ports at that moment was about 50% of capacity, demonstrating Ukraine's potential to increase sea traffic through its ports. Moreover, in 2020 and 2021, the transhipment of containers in the ports of Ukraine reached the mark of more than 1 million TEU, which was the largest transhipment among ports in the Black Sea region, while the total volume of container transhipment in the area was approximately 3 million TEU.

> *Since Russia blocked the Ukrainian Black Sea ports, Ukraine has started actively developing Danube ports and established a new sea corridor closer to the shore*

  Since Russia blocked the Ukrainian Black Sea ports in 2022, Ukraine has started actively developing Danube ports. By the end of 2023, these were expected to handle

[53] "Deutsche Bahn допоможе у відбудові Української залізниці [Deutsche Bahn Will Help in the Reconstruction of the Ukrainian Railway]," UZ, 20 September 2022.

[54] Initial volume. Ukraine and Poland also periodically agreed on small amounts of additional transportation permits. Also, transportation through the territory of Poland was possible under ECMT multilateral permits.

[55] "У 2020-му морські порти обробили близько 160 млн тонн вантажів, - Владислав Криклій [In 2020, sea ports processed about 160 million tons of cargo, - Vladyslav Krykliy]," Ministry for Restoration (Ukraine), 5 January 2021.

[56] "Country Level – Gross Weight of Goods Handled in All Ports," Eurostat, accessed in February 2024.

up to 4 million tons per month, almost doubling their pre-war capacity. Moreover, after the Black Sea Grain Initiative (BSGI) collapsed in July 2023 as a result of Russia's withdrawal, Ukraine — with the support of Bulgaria and Romania — established a new sea corridor closer to the shore under the protection of the Ukrainian Armed Forces. In November 2023, this corridor allowed shipping of about 1.5 million tons, coming close to the BSGI levels before its collapse yet remaining well below the pre-war volume.

Given the positive pre-war dynamics of the growth of the capacity of ports in Ukraine and the importance of maritime transport for the EU economy, Ukraine's accession to the EU's single market of international maritime transport services is expected to allow it to realise its potential as a transit country. In particular, with the development of multimodal transport, Ukraine has a chance to become one of the most important transport hubs in Europe. This may also be facilitated by the gradual weakening of Russia's role as a transport corridor due to the European Union's termination of trade relations.

With the development of multimodal transport, Ukraine has a chance to become one of the most important transport hubs in Europe

- **Airports**: Before the full-scale war, Ukraine's air transportation services accounted for about 1% of GDP. In 2021, 19 airports and airfields in Ukraine served 16.2 million passengers (86.2% more than in 2020).[57] The passenger and freight traffic was provided by 28 domestic airlines. In addition, there are 78 entities of commercial services and airport services in Ukraine, 42 developers and 26 aircraft manufacturers, 252 organisations that have a certificate for providing agency services for the sale of passengers, and 48 organisations for the sale of air cargo.[58]

  Ukraine has concluded 26 intergovernmental agreements on scheduled air services with EU countries. Such agreements determine the number and frequency of flights on routes between countries, connections, and the number of air carriers that can serve such flights. However, the largest opening of markets should have occurred after the signing of the CAA Agreement in 2021, but this was put on hold by the war. Still, it can be expected that after Ukrainian airspace becomes safe again, the country can offer a convenient route for transit to Asia and Australia.

  The development of freight transportation after the war's end will depend not only on the implementation of the provisions of the CAA Agreement but also on investment in freight capacity. The cargo terminals of Ukraine's largest airport, Boryspil, were overloaded before the war, and Lviv airport had no cargo terminal. Therefore, with increased cargo traffic, airports near large cities, for example, the airfield in Bila Tserkva, could receive additional impetus for development. For that to happen, it is necessary to install navigation equipment to receive aircraft at night and in bad weather and to open an international checkpoint to receive foreign cargo. The Ministry of Infrastructure planned to start constructing a new cargo terminal at Boryspil Airport in the autumn of 2020 and complete it by the end of 2021. However, all infrastructure projects at the airport were later suspended.[59]

4.4. Critical Raw Materials

Another sector with a new and growing contribution from Ukraine is the extraction and processing of critical raw materials. The EU's long-term policy priority is to ensure the stable supply of raw materials crucial for the green transition amid increasing global competition for access to these resources.

In 2021, the EU and Ukraine signed a strategic partnership on raw materials, generating a surge in interest from private companies in Ukraine. UkraineInvest, the state investment

[57] "Results of the Aviation Industry of Ukraine for 2021," State Aviation Administration of Ukraine, accessed in February 2024.

[58] "Certificates," State Aviation Administration of Ukraine, accessed in February 2024.

[59] "DHL Express Considers Boryspil Airport as an Alternative to Hubs in Moscow and Istanbul," *Economichna Pravda*, 18 August 2020.

promotion office, claimed to have received hundreds of investment proposals in this area.[60]

A contribution from Ukraine is the extraction and processing of critical raw materials, which the EU needs to ensure the stable supply for the green transition amid increasing global competition

This interest is justified as Ukraine has significant and, in some cases, still untapped mineral deposits, including titanium, neon, nickel, lithium, beryllium, zirconium, tantalum, and a complex of phosphoric rare-earth and rare-metal ores.[61] For instance, Ukraine is second in the world in gallium production after China (9 tons and 2.9% of the global output) and fifth in germanium extraction (1 ton and 1% of the global output) after China, Russia, the US, and Japan. Both these minerals are on the EU list of critical raw materials, with the import reliance rate and substitutability index close to one, suggesting high supply risks.[62]

Moreover, Ukraine is estimated to have Europe's most extensive untapped lithium deposits.[63] Although the official data on lithium deposits has been kept secret, experts estimate them to be at least 14 million tonnes.[64] There are at least four lithium deposits in the country: Shevchenkivske (Donetsk oblast), Polokhivske and Dobra (Kyrovograd oblast), and Kruta Balka (Zaporizhzhya oblast). Three projects were expected to be auctioned: Kruta Balka, with a lithium oxide content of 0.86%; Dobra, with a lithium oxide content of 1.38%; and Shevchenkivske, with a lithium oxide content of 1.1%.[65] As of now, the war has put these plans on hold.

For the EU, it would be beneficial to launch the exploration of these and other deposits, thereby making Ukraine, as an EU member, a crucial supplier of these critical raw materials. However, the environmental concerns are expected to be high as these are new explorations, with possible collateral damage to the environment and living neighbourhoods. For Ukraine, the benefits would come from launching exploration and locating significant parts of supply chains in the country, up to and including creating end-user products.

4.5. ICT Sector[66]

The Ukrainian ICT sector is among the most dynamic in the Ukrainian economy, driven by export orientation, a well-educated labour force, and a favourable tax regime. In 2020, the information and communication sector accounted for about 6% of the country's value added or about EUR 6 billion, compared to 4% in 2013. Computer programming, consulting, and related services expanded the most, with their share of value-added growth increasing from 1% in 2013 to 2.7% in 2020.[67] The Ukraine IT Report 2022 states:

The Ukrainian ICT sector is among the most dynamic in the Ukrainian economy, driven by export orientation, a well-educated labour force, and a favourable tax regime

> The IT industry has transformed from a highly-niche sector into a trailblazing domain attracting as many as 54% of Ukrainian high school students and foreign investments worth on average USD 300–700 million a year.[68]

[60] Diana Kinch, "Ukraine May Advance with Critical Minerals Project Auctions This Year: Geological Service," S&P Global, 10 May 2021.

[61] "Mineral Resources in Ukraine," Mining World Ukraine, accessed in February 2024.

[62] European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the 2017 List of Critical Raw Materials for the EU, COM(2017) 490 final, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0490.

[63] Kinch, "Ukraine May Advance."

[64] Yuriy Grigorenko, "Can Ukraine Produce Batteries and Electric Cars?," *GMK Center*, 31 March 2021.

[65] Kinch, "Ukraine May Advance."

[66] For more about the development and the potential impact of the Ukrainian ICT sector on the EU, see Merle Maigre, "An E-Integration Marathon: The Potential Impact of Ukrainian Membership on the EU's Digitalisation and Cybersecurity," *ICDS*, 11 January 2024.

[67] "Value added at factor costs of business entities by type of economic activity in 2013-2020," State Statistics Service of Ukraine, accessed in February 2024.

[68] "Ukraine Tech Industry 2022: IT Exports Volume, Talent Pool and More. Recapping Key Takeaways from Ukraine IT Report 2022," Rinf.tech, 2023.

According to the Open Data Maturity Report 2022, prepared within the European Commission Initiative data.europe.eu, despite the war and the related challenges, Ukraine has been placed in the trend-setters cluster consisting of the eight top-performing countries (France, Ukraine, Poland, Ireland, Cyprus, Estonia, Spain, and Italy).[69] Ukraine is ranked second in open data maturity, i.e., the availability and reuse of public sector information, after France, with a score close to 100% (the EU-27 average is 79%).[70]

Despite the war Ukraine has been placed in the trend-setters cluster consisting of the eight top-performing countries in open data maturity

Around 296 000 businesses were registered in Ukraine's information and communication sector in 2022, including about 12 000 legal entities and 284 000 private entrepreneurs. Computer programming, consulting, and related services had 5 000 firms (down from almost 7 000 in 2021) and 223 000 private entrepreneurs (up from 210 000).[71] Of 5 000 legal entities, 51% are service companies, 16% are purely product companies, and 33% provide custom software development services while having at least one product.[72] Many Ukraine-based outsourcing companies specialise in cloud computing, artificial intelligence (AI), and big data technologies, while other areas of expertise are DevOps, Blockchain, embedded/IoT, robotics and digital assurance.[73]

In 2022, Ukraine's computer services exports were USD 7.3 billion, 7% up on 2021, and continuing to grow despite the war. However, the expansion stopped in 2023 amid difficulties with keeping clients and employees, as working conditions remain uncertain due to threats of blackouts, shelling, and problems with business trips for men.[74] In January–October 2023, computer services exports were USD 5.6 billion compared to USD 6 billion a year before.

The US has been Ukraine's leading export destination, accounting for about 41% of Ukraine's computer services exports in 2022 and 39% in the first ten months of 2023. The share of the EU was 31% in 2022 and increased to 34% in January–October 2023, as exports to the EU did not decline, likely due to more accessible clients. Malta and Cyprus are the leading destinations for Ukraine's exports.

Ukraine's ITC sector accounts for about 1% of the sector in the EU, amounting to EUR 631 billion in 2020.[75] But being vibrant, flexible, and competitive globally, there is a strong case for successful integration.

4.6. Investments in Reconstruction

According to the last updated Rapid Damage and Needs Assessment (RDNA 2) provided by the World Bank, the overall damage in Ukraine reached EUR 383 billion by March 2023.[76] For comparison, the estimated damage is roughly more than twice the GDP of Ukraine before the outbreak of the war. These estimates do not include the damage to the Kakhovka dam, which is estimated to amount to around EUR 3 billion. The task of reconstructing Ukraine will require a significant amount of investment.

Ukraine's underdeveloped financial and capital market and weak corporate governance had hindered international investments before the war. To this end, Ukraine's EU accession path and plans for its reconstruction provide opportunities for the country to align with

69 Giulia Carsaniga, Eline N. Lincklaen Arriëns, Jochem Dogger, Mariska van Assen, and Gianfranco Cecconi, *Open Data Maturity Report 2022* (Luxembourg: Publications Office of the European Union, 2022).

70 Open data maturity is a measure of the progress of European countries in promoting and facilitating the availability and reuse of public sector information. The four dimensions of open data maturity include (1) the level of development of national policies promoting open data, (2) the features and data made available on national data portals, (3) the quality of the metadata on national data portals, and (4) initiatives to monitor the reuse and impact of open data (see https://data.europa.eu/en/publications/open-data-maturity/2023).

71 "Number of active business entities by type of economic activity in 2010-2022," State Statistics Service of Ukraine, accessed in February 2024.

72 "Ukraine Tech Industry 2022," Rinf.tech.

73 "Ukraine Tech Industry 2022," Rinf.tech.

74 We analysed the volume of Ukrainian IT exports for the 3rd quarter and asked experts what to expect by the end of the year. Yulia Sabadashyna, "Trends are disappointing," DOU, 1 November 2023.

75 "ICT Sector – Value Added, Employment and R&D," Eurostat, last modified in February 2022.

76 "Updated Ukraine Recovery and Reconstruction Needs Assessment," European Commission, 23 March 2023.

the EU's legislation and policies, improve corporate governance, and create a proper business environment for attracting local and international investments.

Ukraine's EU accession path and plans for its reconstruction provide opportunities to align with the EU's legislation and policies, improve corporate governance, and create a proper business environment

While Ukraine is expected to receive large sums of investments from the EU and other international partners, the investments should be distributed carefully to align with the country's absorption capacity. Moreover, the excessive influx of foreign funding should be avoided in low-productivity sectors.[77]

While Ukraine is expected to receive large sums of investments from the EU and other international partners, the investments should be distributed carefully to align with the country's absorption capacity

So far, the EU has proposed setting up the Ukraine Facility to support Ukraine's recovery and reconstruction for 2024–27. The Ukraine Facility is supposed to be built within the EU's multiannual financial framework (MFF) with the aim of mobilising EUR 50 billion, two-thirds of which would come in loans (EUR 33 million) and one-third in grants (EUR 17 billion).[78] The Facility will have three pillars:

- Pillar I will provide financial support of around EUR 39 billion (EUR 33 billion in loans and EUR 6 billion in grants) for the Ukrainian state to fund reconstruction and reforms needed for its EU accession;
- Pillar II will be dedicated to setting up the "Ukraine investment framework" and creating a specific "Ukraine guarantee" of up to EUR 8 billion in grants;
- Pillar III will provide around EUR 3 billion for technical assistance for mobilising expertise and training for reforms.

While the Ukraine Facility initiative is very much needed, the funds proposed for the Ukraine investment framework and guarantees are relatively small.

Sufficient financial resources should be devoted to insurance for war-related and political risks. To this end, the role of the World Bank's Multilateral Investment Guarantee Agency (MIGA) will be crucial. MIGA has issued USD 195 million to cover political risk insurance guarantees since Russia's full-scale invasion of Ukraine.[79] MIGA also launched Ukraine's Reconstruction and Economy (SURE) Trust Fund in February 2023.[80] The SURE Trust Fund will be dedicated to providing trade finance guarantees, insurance on bank reserves in conflict times, and political risk insurance for the reconstruction after the war. Given the need for Ukraine's reconstruction, the funds mobilised by MIGA through all its projects and funds should be scaled up significantly to provide sufficient guarantees for political and war-related risks.

Conclusions and Recommendations

In conclusion, the prospect of Ukraine's accession to the EU brings some challenges but mostly holds immense potential for mutual economic benefit.

- **Free movement of goods.** Ukraine's access to the EU's single market builds on the strong foundations of the EU-Ukraine DCFTA, which has already largely liberalised trade between the parties. Additionally, as a response to Russia's full-scale invasion of Ukraine, the EU has already fully liberalised its market for Ukrainian goods under the ATMs. However, Ukraine's share in the EU's

[77] De Haas and Pivovarsky, "The Reconstruction and Development."

[78] Tim Peters and Marianna Par, *Establishing the Ukraine Facility. Financing Ukraine's recovery and its path to EU accession* (European Parliamentary Research Service, Members' Research Service PE 753.954, November 2023).

[79] "MIGA's Ukraine Response," Multilateral Investment Guarantee Agency, World Bank, accessed in February 2024.

[80] "Belgium Contributes to MIGA's Trust Fund to Support Ukraine," Multilateral Investment Guarantee Agency, World Bank, 13 October 2023.

total trade is rather marginal; full access under the ATM has not caused drastic changes in the EU's imports or in the functioning of the single market in general. Yet, it has affected several EU Member States that border Ukraine and provided entry gates for Ukraine to the EU's internal market, which has also given rise to a number of politically sensitive disputes. These issues could be dealt with by redirecting Ukrainian goods across the EU beyond the bordering countries of Ukraine and, if needed, introducing temporary measures on imports of selected products to certain countries. To avoid such disruptions in the future, the accession treaty could, if necessary, include transition periods for full market access for Ukrainian goods in those EU Member States that may be vulnerable to a sharp increase in imports from Ukraine.

- **Free movement of services.** The full trade liberalisation in services is expected to have more trade-easing effects, particularly from the EU's side, as the EU holds most of the reservations, while Ukraine has only minor reservations in services trade. But considering that Ukraine's share in the EU's external services is marginal, the EU as a whole is not likely to be greatly impacted. Germany and Poland, already the major partners for Ukraine in services trade, will likely absorb more services trade with Ukraine. As this paper has shown, the services trade with Ukraine's other major partners, including Estonia, Malta, Ireland, Croatia and Lithuania, has been steadily increasing since the application of the EU-Ukraine DCFTA; thus, trade absorption capacity should be sustainable across Ukraine's major partners in services trade.

Trade absorption capacity should be sustainable across Ukraine's major partners in services trade

- **Free movement of capital.** Ukraine's full integration into the EU's single market would require Ukraine to come in line with EU legislation and policies on capital markets that are not included in the provisions of the EU-Ukraine DCFTA. Given the underdevelopment of Ukraine's financial sector and capital markets, legislative and policy alignment should serve as a solid foundation for financial deepening in the country. In light of Ukraine's reconstruction, this would also contribute to creating a transparent and sustainable environment for risk-sharing arrangements with the EU, bilateral donors and multilateral development institutions. Eased movement of capital will make it significantly easier to conduct business and trade and commercial and non-commercial payments between Ukraine and the EU.

Eased movement of capital will make it significantly easier to conduct business and trade and commercial and non-commercial payments between Ukraine and the EU

  To address the risks related to the free movement of capital, the safeguard measures specified by the TFEU should be applied. In particular, if the EU Single Market is jeopardised, the safeguard clause stipulated by Article 144 TFEU should be invoked. This would enable the protective balance of payments measures within the framework of the balance of payments assistance programmes. This safeguard clause is only available to the EU Member States outside the euro area. Ukraine would qualify for the application since it would need several more years to be ready to join the European Monetary Union following its accession to the EU. The EU Treaty does not provide a timetable to EU Member States for joining the euro, so Ukraine could benefit from the flexibility when it comes to meeting the convergence criteria and join the euro area when it is ready. In case risks arise around the large outflows of capital from Ukraine, Article 65 of the TFEU should be invoked to introduce exceptional restrictions to control the capital flows with Ukraine, as it was during the European sovereign debt crisis when Cyprus (2013) and Greece (2015) introduced capital controls to prevent excessive capital outflows.

- **Free movement of workers.** The application of the Temporary Protection Directive has already enabled over 4 million Ukrainian refugees to gain full access to the EU's labour market, which so far has not caused any disruptions to the labour markets in the EU. It is difficult to make precise predictions about the Ukrainian population after the war ends and which sectors will have labour shortages in the EU when Ukraine becomes an EU member. However, it is clear that as long as Ukrainian workers fit the labour demands in the receiving EU countries, they could fill the gap in the labour supply and complement rather than replace local workers. To this end, introducing transitional periods in the Accession Treaty could be an efficient tool for the EU Member States to monitor and manage additional labour inflow from Ukraine. At the same time, such transitional periods would also help Ukraine avoid shortages in its labour force, ensuring that human capital is retained in the country, particularly given the resources needed for sustainable reconstruction and recovery of the country after the war.

As long as Ukrainian workers fit the labour demands in the receiving EU countries, they could fill the gap in the labour supply and complement rather than replace local workers

- **An enlarged EU as a global supplier.** In terms of advantages, Ukraine could strengthen the EU's position as a global supplier of critical materials and key agricultural products. However, this will require improving transport connections and ensuring that economic activities run in line with the EU's energy policy and green transition targets. Ukraine could also contribute to the EU technologically with its strongly emerging ICT sector and increasing skills and know-how in IT and computer services — areas where the EU currently has labour shortages.

- **Ukraine's Reconstruction.** A significant challenge lies ahead in the reconstruction and sustainable recovery of Ukraine. Meeting this challenge requires substantial financial support. Mobilising private capital within the country is paramount, as is aligning with the reforms outlined by the EU for Ukraine's integration. Reconstruction should happen hand in hand with the implementation of the reforms set out for Ukraine's accession to the EU.

Reconstruction should happen hand in hand with the implementation of the reforms set out for Ukraine's accession to the EU

In summary, by addressing these considerations with foresight and diligence, Ukraine's accession to the EU could not only elevate Ukraine's standing but could also strengthen the EU's position on the global stage.

Annex A

Trade in Goods

Table A1. EU Exports of Goods to Ukraine, EUR Millions

	2016	2017	2018	2019	2020	2021	INCREASE	GROWTH
Austria	416.8	493.6	526.0	607.9	560.0	655.3	1.6	57%
Belgium	566.1	658.3	610.8	642.6	603.4	758.8	1.3	34%
Bulgaria	142.4	150.5	188.3	340.9	227.8	405.8	2.9	185%
Croatia	30.3	29.0	36.2	42.3	58.3	57.8	1.9	91%
Cyprus	6.4	8.7	7.3	10.0	14.6	9.9	1.5	55%
Czechia	803.1	1,064.4	1,224.8	1,295.5	1,166.1	1,271.2	1.6	58%
Denmark	227.6	244.6	271.3	330.9	286.9	378.5	1.7	66%
Estonia	71.4	75.3	87.2	138.6	155.7	134.2	1.9	88%
Finland	174.1	200.0	220.7	218.4	193.7	239.5	1.4	38%
France	725.5	856.8	870.8	1,062.4	1,012.8	1,207.3	1.7	66%
Germany	3,647.1	4,437.8	4,585.2	4,917.8	4,678.1	5,508.0	1.5	51%
Greece	200.5	124.8	181.6	210.8	193.7	338.8	1.7	69%
Hungary	1,445.4	2,055.2	2,614.9	2,588.0	2,261.3	2,951.5	2.0	104%
Ireland	39.4	44.3	49.8	65.4	71.2	91.2	2.3	132%
Italy	1,096.7	1,384.8	1,635.1	1,752.2	1,697.8	2,109.7	1.9	92%
Latvia	113.2	139.2	157.0	177.0	235.1	249.3	2.2	120%
Lithuania	610.4	736.0	868.0	1,072.9	896.4	1,314.9	2.2	115%
Luxembourg	14.6	13.0	15.8	27.6	12.9	13.7	0.9	-6%
Malta	0.1	0.1	0.2	1.4	2.2	4.7	35.3	3428%
Netherlands	775.9	926.9	1,057.4	1,208.4	1,192.4	1,367.7	1.8	76%
Poland	3,452.5	4,275.0	4,444.2	4,975.0	5,246.5	6,272.9	1.8	82%
Portugal	20.0	31.0	23.0	25.5	30.7	35.6	1.8	78%
Romania	400.5	486.8	511.5	601.3	569.4	684.0	1.7	71%
Slovakia	408.7	524.7	494.3	626.5	666.0	829.8	2.0	103%
Slovenia	121.9	144.7	152.8	232.1	228.8	244.4	2.0	101%
Spain	301.9	391.1	398.7	612.0	504.8	676.4	2.2	124%
Sweden	364.0	341.2	315.7	369.0	350.4	481.4	1.3	32%
Total	**16,176.5**	**19,837.9**	**21,548.5**	**24,152.7**	**23,117.1**	**28,292.4**	**1.7**	**75%**

Source: Authors' calculations based on the Eurostat database.

Table A2. EU Imports of Goods from Ukraine, EUR Millions

	2016	2017	2018	2019	2020	2021	INCREASE	GROWTH
Austria	446.2	602.3	547.3	688.8	582.5	873.6	2.0	96%
Belgium	315.3	443.7	538.0	601.9	520.2	678.4	2.2	115%
Bulgaria	409.8	458.3	477.9	535.9	583.5	835.7	2.0	104%
Croatia	38.3	23.9	26.8	35.7	37.3	43.9	1.1	15%
Cyprus	26.9	41.3	32.2	30.0	21.6	20.9	0.8	-22%
Czechia	635.5	763.5	857.3	944.2	798.3	1,286.7	2.0	102%
Denmark	107.2	128.8	198.7	219.8	164.9	202.6	1.9	89%
Estonia	66.7	90.9	113.9	104.2	78.6	112.0	1.7	68%
Finland	51.7	67.0	76.4	34.6	39.1	59.3	1.1	15%
France	467.0	409.2	498.9	586.8	515.8	728.2	1.6	56%
Germany	1,421.0	1,740.3	2,047.7	2,242.4	1,844.3	2,118.8	1.5	49%
Greece	164.4	183.5	164.7	186.5	179.0	198.4	1.2	21%
Hungary	1,105.3	1,642.8	1,538.4	1,581.3	1,297.0	1,960.4	1.8	77%
Ireland	43.2	38.9	47.2	84.8	81.9	65.8	1.5	52%
Italy	1,984.0	2,476.7	2,623.7	2,500.9	1,883.3	3,288.3	1.7	66%
Latvia	110.9	151.8	165.1	187.1	183.0	227.1	2.0	105%
Lithuania	201.3	237.7	245.6	318.7	296.2	444.9	2.2	121%
Luxembourg	4.9	7.4	7.4	10.2	10.1	13.0	2.6	164%
Malta	2.9	2.1	7.7	3.4	4.1	5.7	1.9	95%
Netherlands	899.3	1,527.7	1,509.0	2,102.2	1,809.0	2,449.9	2.7	172%
Poland	1,813.0	2,136.5	2,510.4	2,661.2	2,535.5	4,182.6	2.3	131%
Portugal	211.7	246.2	242.4	265.8	205.9	296.6	1.4	40%
Romania	705.2	807.6	835.8	930.4	932.6	1,322.5	1.9	88%
Slovakia	442.9	611.2	652.0	543.3	349.0	869.1	2.0	96%
Slovenia	23.5	43.4	60.1	73.5	72.4	124.6	5.3	430%
Spain	1,091.6	1,281.8	1,340.5	1,579.0	1,238.4	1,528.6	1.4	40%
Sweden	70.4	75.0	70.1	86.1	71.7	92.3	1.3	31%
Total	**12,860.1**	**16,239.4**	**17,435.6**	**19,138.6**	**16,335.1**	**24,029.9**	**1.9**	**87%**

Source: Authors' calculations based on the Eurostat database.

ANNEX B

Trade in Services

Table B1. Services Exports from Ukraine to the EU, USD Millions

Services Exports	2016	2017	2018	2019	2020	2021	Increase	Growth
Austria	258.44	303.01	367.78	341.44	299.98	295.99	1.15	15%
Belgium	91.44	92.93	108.02	124.53	126.05	149.15	1.63	63%
Bulgaria	64.56	64.32	65.92	79.30	54.72	79.91	1.24	24%
Croatia	6.44	5.40	7.78	11.90	7.95	14.66	2.28	128%
Cyprus	95.85	13.83	17.42	137.16	154.20	165.36	1.73	73%
Czech Republic	72.84	84.03	94.45	111.60	107.47	143.10	1.96	96%
Denmark	172.31	208.90	258.43	304.91	261.67	216.08	1.25	25%
Estonia	23.71	34.47	46.48	77.51	74.74	166.60	7.03	603%
Finland	29.47	38.77	40.99	36.73	36.38	47.51	1.61	61%
France	168.94	167.30	206.80	251.33	242.31	309.96	1.83	83%
Germany	417.35	529.18	593.01	595.66	445.14	544.70	1.31	31%
Greece	49.85	54.71	74.34	75.45	54.20	70.17	1.41	41%
Hungary	186.75	192.97	230.58	264.36	175.60	191.10	1.02	2%
Ireland	74.38	84.72	120.13	135.49	133.08	97.12	1.31	31%
Italy	316.41	370.98	281.84	295.75	225.16	375.16	1.19	19%
Latvia	30.63	35.99	62.78	57.66	39.64	57.37	1.87	87%
Lithuania	45.05	55.27	61.40	82.52	65.38	100.43	2.23	123%
Luxembourg	34.83	40.29	39.56	67.49	62.77	74.08	2.13	113%
Malta	9.52	13.55	16.75	14.60	8.86	35.30	3.71	271%
Netherlands	174.65	249.76	302.04	308.50	303.85	366.09	2.10	110%
Poland	266.74	340.64	383.16	452.42	455.22	567.03	2.13	113%
Portugal	31.00	32.23	36.46	39.30	31.94	43.94	1.42	42%
Romania	77.58	96.70	100.88	98.37	81.50	104.26	1.34	34%
Slovak Republic	38.85	46.57	56.24	58.42	55.45	70.27	1.81	81%
Slovenia	16.43	21.02	22.06	23.80	27.64	31.45	1.91	91%
Spain	292.58	333.45	384.89	396.61	291.76	361.07	1.23	23%
Sweden	101.71	94.21	101.29	79.43	196.28	115.79	1.14	14%
Total	**3,148.30**	**3,605.21**	**4,081.50**	**4,522.27**	**4,018.95**	**4,793.63**	**1.52**	**52%**

Source: Authors' calculations based on the BaTIS database.

Table B2. Services Imports from the EU by Ukraine, USD Millions

Imports	2016	2017	2018	2019	2020	2021	Increase	growth
Austria	214.31	219.46	246.76	252.12	189.33	210.15	0.98	-0.02
Belgium	124.54	159.34	202.22	264.15	272.34	339.76	2.73	1.73
Bulgaria	152.72	177.45	228.36	270.62	115.30	229.37	1.50	0.50
Croatia	42.90	47.13	63.69	107.55	39.13	115.15	2.68	1.68
Cyprus	110.56	116.57	139.64	190.95	189.75	221.93	2.01	1.01
Czech Republic	332.27	435.74	537.52	680.57	576.05	546.96	1.65	0.65
Denmark	155.49	166.44	173.54	224.44	202.17	257.58	1.66	0.66
Estonia	41.07	61.35	68.31	81.87	72.79	132.59	3.23	2.23
Finland	46.92	53.75	54.12	56.94	45.40	54.72	1.17	0.17
France	324.09	318.81	345.73	499.66	409.14	476.13	1.47	0.47
Germany	764.49	945.91	1,047.62	1,171.63	1,038.25	1,155.40	1.51	0.51
Greece	192.87	227.71	262.25	351.70	149.87	280.06	1.45	0.45
Hungary	319.84	387.03	416.51	458.79	218.18	270.92	0.85	-0.15
Ireland	126.02	158.83	444.44	541.05	663.70	735.68	5.84	4.84
Italy	270.63	381.42	336.18	313.18	223.52	355.99	1.32	0.32
Latvia	47.86	61.71	71.82	83.24	43.74	66.48	1.39	0.39
Lithuania	68.29	86.52	100.64	147.97	89.86	162.40	2.38	1.38
Luxembourg	154.33	144.49	162.86	157.36	102.00	117.72	0.76	-0.24
Malta	24.07	21.29	29.23	22.79	16.87	17.86	0.74	-0.26
Netherlands	230.55	284.30	301.85	302.29	254.41	387.99	1.68	0.68
Poland	1,842.92	2,579.45	2,843.57	2,945.11	2,261.87	2,643.98	1.43	0.43
Portugal	38.79	48.79	56.67	65.27	33.60	54.48	1.40	0.40
Romania	72.49	80.60	87.78	117.75	98.43	130.85	1.80	0.80
Slovak Republic	120.05	121.99	124.74	130.16	68.07	104.41	0.87	-0.13
Slovenia	23.77	27.04	32.55	34.78	22.65	31.55	1.33	0.33
Spain	390.00	413.92	428.95	511.75	352.32	476.60	1.22	0.22
Sweden	112.71	104.86	114.57	126.87	90.16	131.42	1.17	0.17
Total	**6,344.5**	**7,831.9**	**8,922.1**	**10,110.6**	**7,838.9**	**9,708.1**	**1.53**	**0.53**

Source: Authors' calculations based on the BaTIS database.

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