In cooperation with IER

German Economic Team

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POLICY STUDY UKRAINE

The impact of the EU Solidarity Lane on road-based trade

Iryna Kosse, Oksana Kuziakiv, Garry Poluschkin, Robert Kirchner

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Executive summary

- The Road Transport Agreement, signed in June 2022, removed permit requirements for Ukraine–EU freight. It became critical for trade continuity during wartime.
- By 2024, road-based trade with the EU reached USD 38 bn, up 20% from 2021. Road's volume share stayed at 18–22%, but its role became critical due to seaport disruption.
- Our scenario analysis shows that without the agreement, road-based trade with the EU would have been significantly lower during 2022–2024:
  - USD 13.3 bn lower under Scenario 1 (8% of factual total trade with EU)
  - USD 20.2 bn lower under Scenario 2 (12%)
  - USD 26.0 bn lower under Scenario 3 (15%)
- The eCherha digital queue system helped manage border flows and unlock road capacity.
- For the EU, the agreement boosted exports to Ukraine by 50%, but triggered protests in border states due to increased competition.
- The agreement was a key enabler of trade resilience. A stable long-term framework is now needed.

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Structure

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2. Background: What is the Solidarity Lane?
3. Ukraine’s road-based trade with the EU
4. Methodology
5. Estimate of the economic impact
6. Impact of eCherha information service
7. Policy recommendations and conclusion

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1. Introduction

Motivation

- Before the war, Ukraine's road exports to the EU was subject to permit shortages from EU countries
- The German Economic Team (GET) and the Institute for Economic Research and Policy Consulting (IER) (2022) have jointly analysed the effect of the shortage of bilateral transport permits for trucks on the trade between Ukraine and EU
- Since the start of the war, Russia has been significantly blocking Ukraine's exports by sea, some key ports are occupied or under constant attacks
- Ever since road has received more attention as an alternative mean of Ukraine's exports
- To support Ukraine's economic resilience, the EU agreed on a temporarily liberalization of the permits and complemented with other measures to address export obstacles in the framework of the so-called "Solidarity Lane"

Purpose of this Policy Study

- Analyse both the export and import side developments since the establishment of Solidarity Lanes
- Quantify the economic impact of this agreement, focusing only on road transport
- Assess benefits for both Ukraine and the EU
- Analysis of the eCherga system on export transport efficiency

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2. Background: What is the Solidarity Lane?

- They were launched in May-22 as an urgent response to Russia's blockade of Ukrainian seaports.
- Goal: to keep Ukraine economically connected to the EU
- Before the war, 98% of Ukraine's grain exports moved through Black Sea ports, while road transport was mainly used for higher value-added goods
- The loss of access to Black Sea forced a reorientation of trade to Ukraine's Western land borders.
- 2023: rail and road routes carried about 3/4 of Ukraine's trade volume vs. ¼ by seaports,
- Only from 4Q2023 onwards, activity in three ports resumed (independently of Russia)
- The initiative also catalyzed the following measures:
  - Investment in border infrastructure,
  - Modernization of customs procedures,
  - Coordination among multiple member states, setting a precedent for deeper logistics integration between Ukraine and the EU.
- Multiple transport modes were used (rail, river, road), but **this study focuses only on road transport**:
  - Road transport liberalization agreement specifically removed permit restrictions, making it a unique case for assessing the impact of regulatory change
  - Road transport remains critical for time-sensitive and high-value goods
  - Understanding this sector's impact will provide insights into future policy directions for EU-Ukraine transport cooperation

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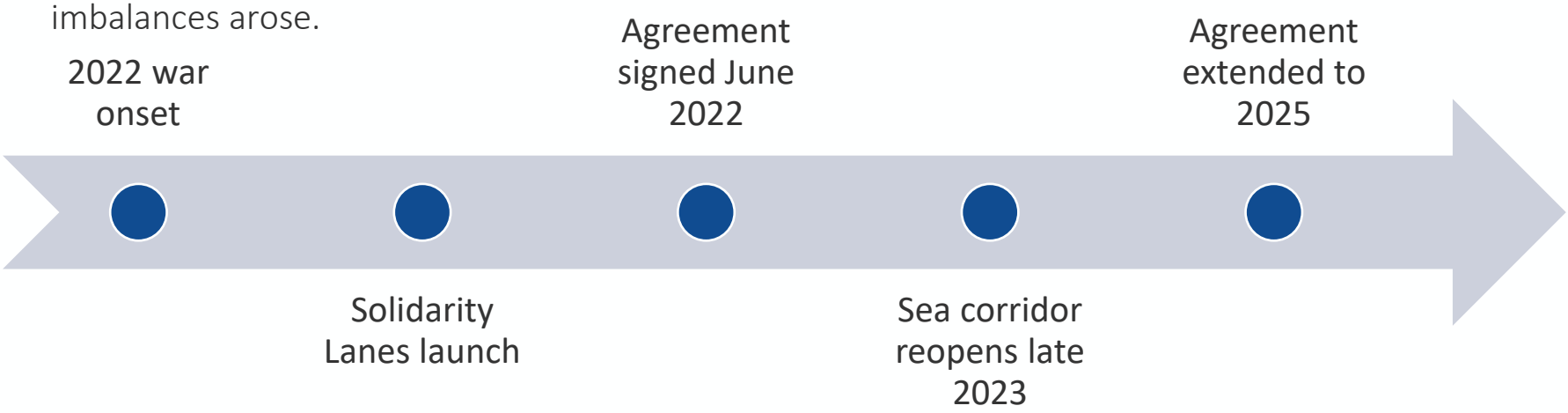
Background: Agreement on the Liberalization of Road Transport

- As part of the EU–Ukraine Solidarity Lanes initiative launched in May 2022 to keep Ukraine's exports moving and support its economy during wartime, the Road Transport Liberalization Agreement was negotiated and signed on 29 June 2022.
- This "transport visa-free" accord suspended the requirement for Ukrainian hauliers to obtain permits for bilateral and transit freight transport into the EU, which were in place before the war. It complemented other Solidarity Lane measures like better border procedures and customs coordination by removing a key regulatory bottleneck on road freight.
- The deal did not authorize cabotage within the EU, or unlimited cross-trade between third countries, which remain subject to separate quotas.
- The permit-free regime was established initially for one year, but it has been renewed and extended multiple times as the war continued. In June 2024, the EU and Ukraine agreed to prolong the agreement through end of 2025, with a switch to automatic 6-month renewals thereafter.
- The extension in 2024 also introduced mechanisms to address market disturbances – such as a joint working group to monitor compliance and provisions to reimpose permit limits if serious imbalances arose.



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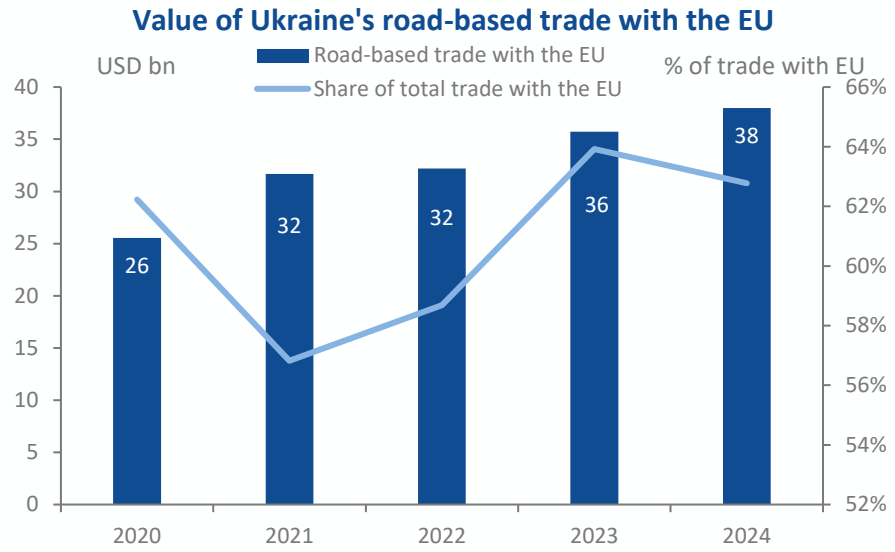
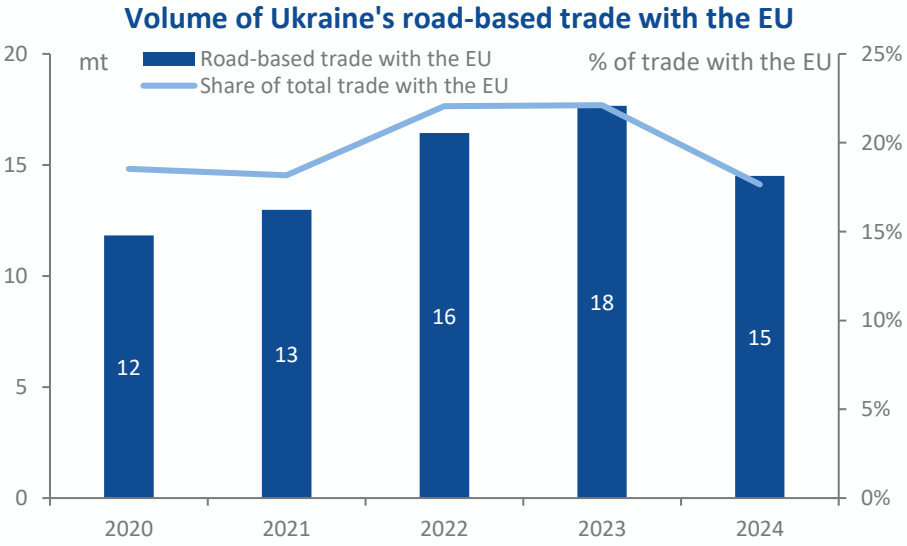
3. Ukraine's road-based trade with the EU



Source: Own display based on State Customs Service of Ukraine



Source: Own display based on State Customs Service of Ukraine

UKR road-based trade with the EU, pre-2022 (Baseline):

- Value: 2021 - USD 31.7 bn; share of total trade with EU – 57%
- Volume: 2021 – 13.0 mt; share of total trade with EU – 18%

UKR road-based trade with the EU, since mid-2022 (Post-Agreement):

- Value: 2024 - USD 38.0 bn; share of total trade with EU – 63%; continuously growing, +20% to 2021
- Volume: 2024 – 14.5 mt; share of total trade with EU – 18%; continuously growing until 2023; 2024: decline by 18% yoy, but growth +12% to 2021

- Redirection of Ukrainian trade in 2022, 2023 due to the loss of access to Black Sea ports
- Volume of road-based trade decreased in 2024 since stable work of Sea Corridor
- Main mean of transportation by value but not by volume

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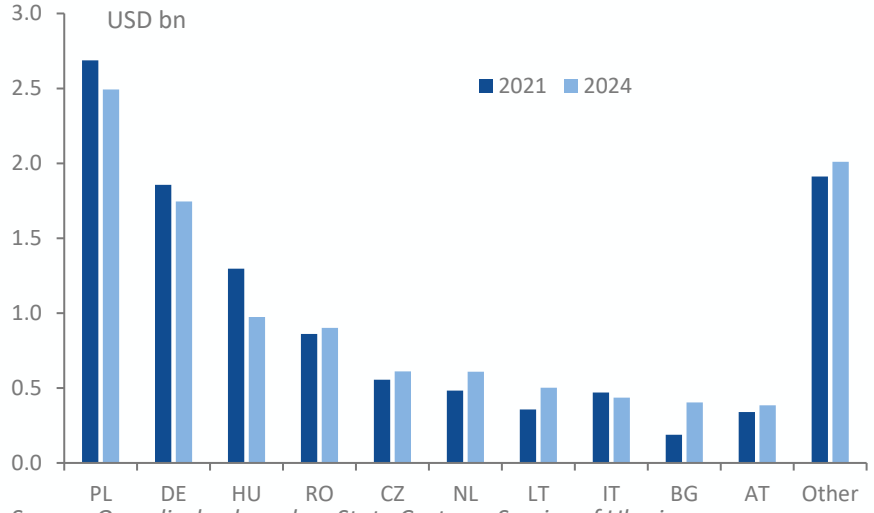
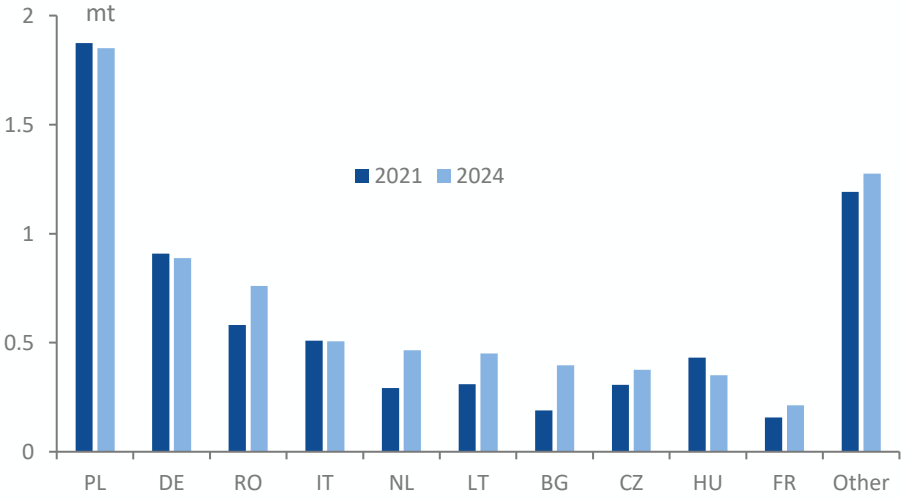
Ukraine’s road-based exports to the EU

Value of Ukraine's road-based exports to EU member states



Source: Own display based on State Customs Service of Ukraine

Volume of Ukraine's road-based exports to EU member states



Source: Own display based on State Customs Service of Ukraine

Road-based exports to the EU, 2024:

- Value: absolute: USD 11.1 bn, share of total exports to EU: 45%, growth: +1% to 2021
- Volume: absolute: 7.5 mt, share of total exports to EU: 11%, growth: +12% to 2021

Main partners, 2024:

- Value:
  - POL: 23% share, -7% drop since 2021
  - GER: 16% share, -6% drop since 2021
  - HUN: 9% share, -25% drop since 2021
- Volume:
  - POL: 25% share, -1% drop since 2021
  - GER: 12% share, -2% drop since 2021
  - ROM: 10% share, +31% growth since 2021

- Main mean of transport for exports to the EU in value
- Poland is the main destination
- However, part of that is transit

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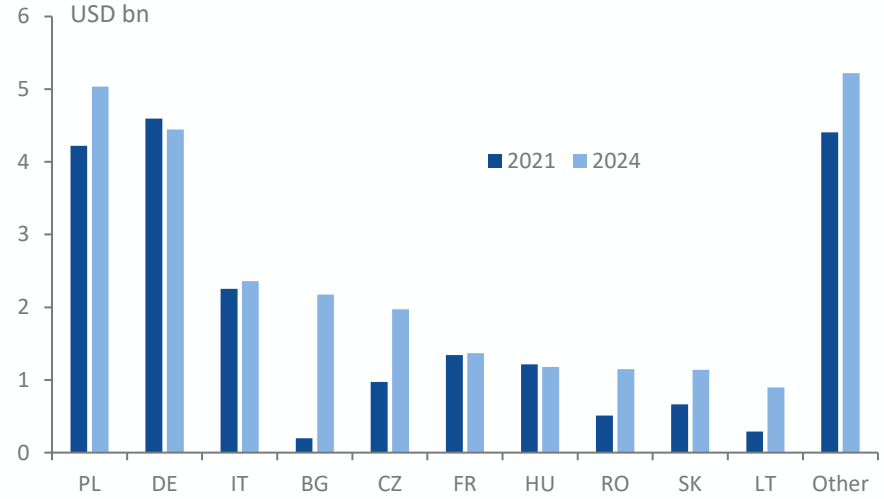
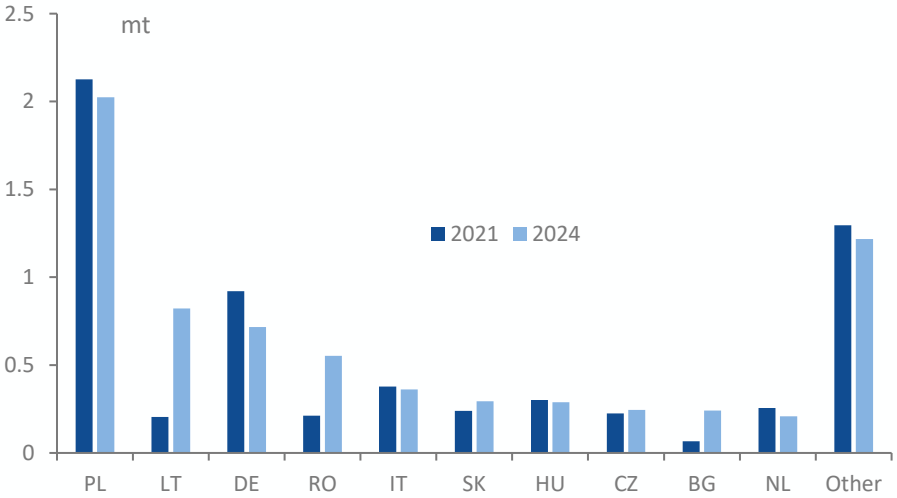
Ukraine’s road-based imports from the EU

Value of Ukraine's road-based imports from the EU



Source: Own display based on State Customs Service of Ukraine

Volume of Ukraine's road-based imports from the EU



Source: Own display based on State Customs Service of Ukraine

Road-based imports from the EU, 2024:

- Value: absolute: USD 20.9 bn, share of total imports from EU: 75%, Growth: 30% to 2021
- Volume: absolute: 7.0 mt, share of total imports from EU: 46%, growth: 12% to 2021

Main partners, 2024:

- Value:
  - POL: 19% share, +19% growth since 2021
  - GER: 17% share, -3% drop since 2021
  - ITA: 9% share, +5% growth since 2021
- Volume:
  - POL: 29% share, -5% drop since 2021
  - LIT: 12% share, 400% growth since 2021
  - GER: 10% share, -22% drop since 2021

- Main mean of transportation of imports from EU
- Road-based imports grew

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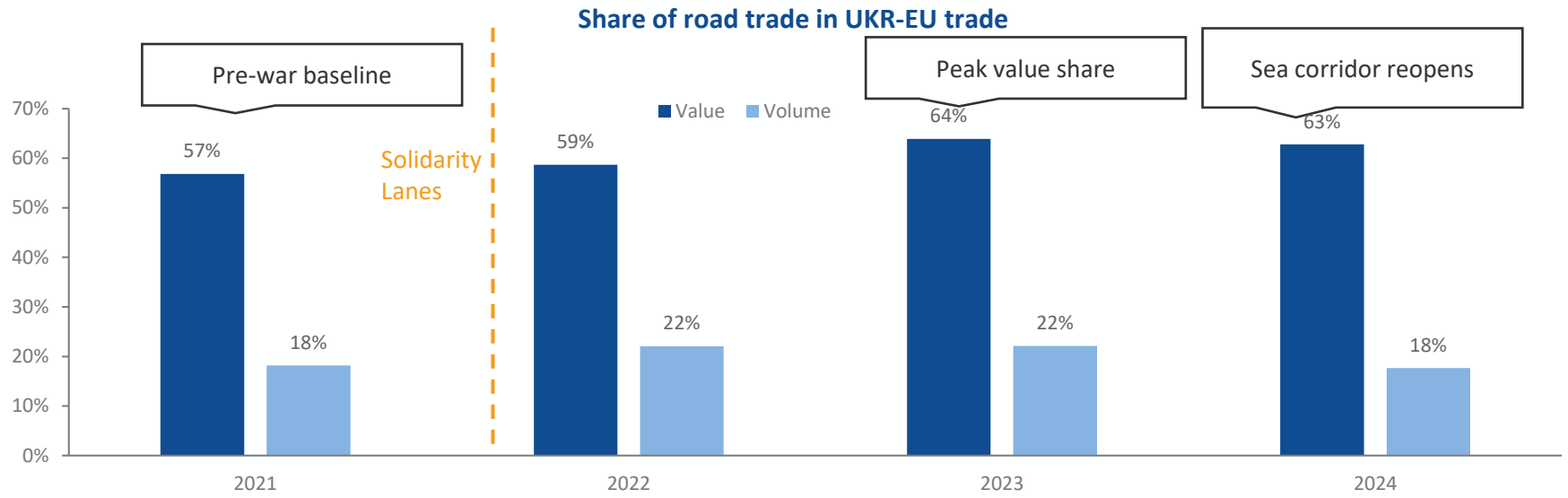
Importance of road-based trade for Ukraine



Source: Own display based on State Customs Service of Ukraine

» Road transport consistently carries 60%+ of trade value, but less than ¼ of volume.

- This reflects road's role in high-value, time-sensitive trade (machinery, electronics, fuel)
- In 2024, road volume returned to pre-war levels, but value share remained structurally higher (63%)
- Despite the reopening of seaports, road remains the backbone for value-intensive EU trade
- The permit-free regime enabled this resilience. Without it, these flows would have been severely constrained

» Road transport is not just a wartime stopgap — it's structurally essential for value-driven trade, even when ports work.

» Surging traffic required new tools like the eCherha system to manage border flows.

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4. Methodology

» Definition of our research question
- How did the Agreement on the Liberalization of Road Transport impact EU-Ukraine trade?
- What is the impact of eCherha?

» Description of methodology
- Comparison of trade volumes and values before and after the Agreement
- Counterfactual scenario(s): what trade would have looked like with permit-based restrictions still in place?

» Description of counterfactual scenarios
- Scenario 1 “Partial Liberalization (Expanded Quota)”: Ukraine receives 640k permits per year (the peak reached in 2018). This scenario assumes some relaxation of permit quotas but no full liberalization. Each permit moves the same average tonnage as in 2021.
- Scenario 2 “Status Quo (2021-level permits)”: UKR continues under the pre-war system of 592k permits p.a., without any liberalization. Trade volume constrained by fixed cap.
- Scenario 3 “Gradual Decline (Extrapolated Trend)”: Permit quotas continue to decrease each year based on 2018–2021 trends. No changes to the permit regime and trade rules occur.

➢ All scenarios apply factual export/import shares and average values per tonne to estimate trade volumes and values under constrained permit availability.

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Scenario assumptions and trade constraints

🟦 **Scenario 1: Partial Liberalization (2018-level Permits)**	🟨 **Scenario 2: No Agreement (Status Quo Permits)**	🟥 **Scenario 3: Declining Permits (Trend Extrapolation)**
640k permits (highest historical level)	592k permits (2021 level), not scaled for wartime needs	2022: 567k → 2024: 540k permits
Covers more demand, but not full wartime volumes	Rapid permit exhaustion → halted flows mid-year	Structural decline despite rising demand
Admin burden remains; permits still required	EU exports face delivery delays	Growing mismatch → shadow trucking, delays
Fewer protests in EU, but more limited export recovery	Ukraine unable to move key exports (grain, steel, machinery)	UKR exporters lose access, logistics sector underused
📌 *Moderate improvement, but constrained flexibility*	📌 *Severe bottlenecks, risk of trade decline*	📌 *Worst-case structural scenario*

Quantitative results (trade losses by year and scenario) shown in slide 18.

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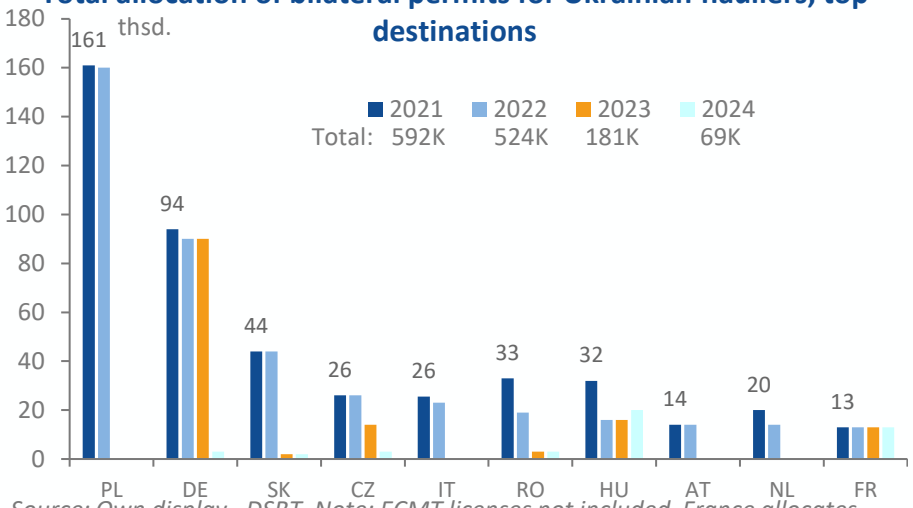
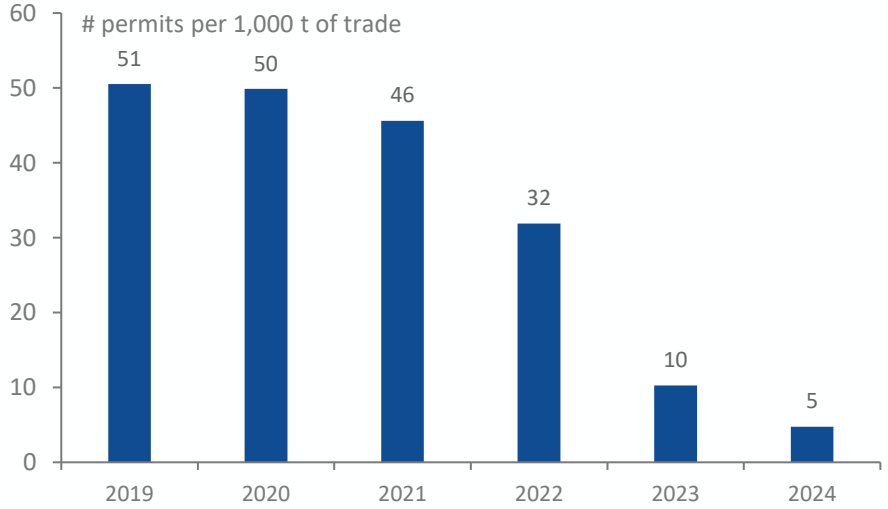
5. Estimate of the economic impact: Allocation of bilateral permits

Total allocation of bilateral permits for Ukrainian hauliers, top destinations



Source: Own display, DSBT. Note: ECMT licenses not included. France allocates „multi" permit, each of them allows 15 trips, each such permit calculated as 15 ordinary.

Coefficient of trade volume permit coverage



Source: DSBT for permit allocation, Ukraine Customs Service for trade volumes, own calculations

- All countries except DEU, FRA and HUN decreased allocations in 2023
  - Reason: Liberalization of Road Transport agreement due to administrative inertia.
- DEU decreased the number of permits in 2024, aligning with the full implementation, extension of the liberalization agreement.
- Permit coverage coefficient: permits allocated per 1000 t of bilateral road trade
- A declining coefficient means that trade grew faster than permit allocations.
- Coverage of UKR-EU road-based trade by bilateral permits for UKR slightly declined in 2021 but fell sharply from 2022 onward.
- In 2024, it was 9 times lower than in 2021, indicating a steep mismatch between permit allocation and trade volume.
- This drop does not reflect improved efficiency.
- **Without liberalization, permits would have become a biding constraint, forcing exporters to delay or reroute shipments.**

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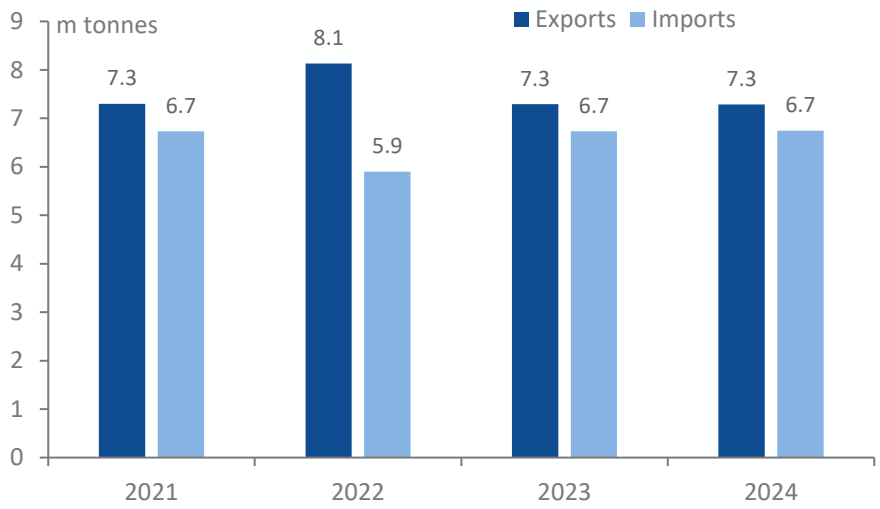
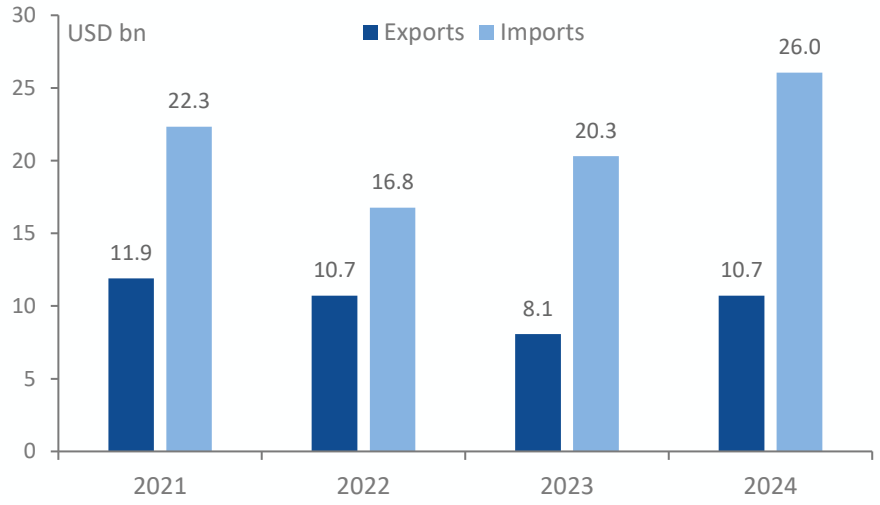
Counterfactual scenario analysis: Scenario 1

Counterfactual volume of road-based trade with EU



Source: own calculations.

Counterfactual value of road-based trade with EU



Source: own calculations.

- Counterfactual scenario 1: Definition: Partial Liberalization – Expanded Permit Quota,
  - Expanded quota on highest historically recorded level 640k permits of 2018.
  - Permit usage per truck is based on 2021 volume per permit of 21.9 t/permit,
- Assumptions:
  - Total permits capped at 640k p.a. (vs. 1.27 m truck crossings in 2023) → 14.0 m t total road trade p.a.
  - Export/import shares and average prices per tonne follow factual data by year
- Estimated outcome (2024):
  - Exports: volume would have been at 7.29 Mt (vs. 7.53 Mt factual), value USD 10.7 bn (vs. USD 11.1 bn factual), -4% in value
  - Imports: volume would have been: 6.7 Mt (vs. 7.0 Mt factual), value USD 26 bn (vs. USD 26.9 bn factual), -3% in value

- **Trade losses are moderate and proportionally similar for both exports and imports under this expanded permit cap.**
- **The permit cap limits Ukraine's ability to scale trade, even under a generous quota.**

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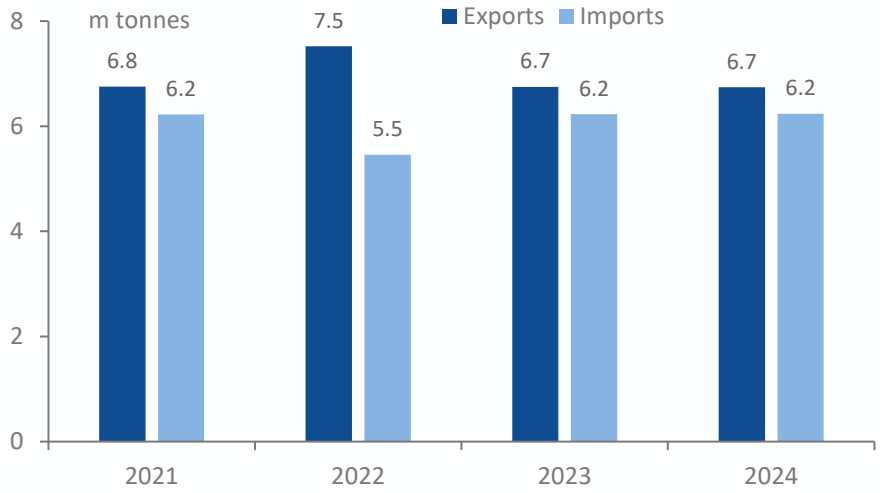
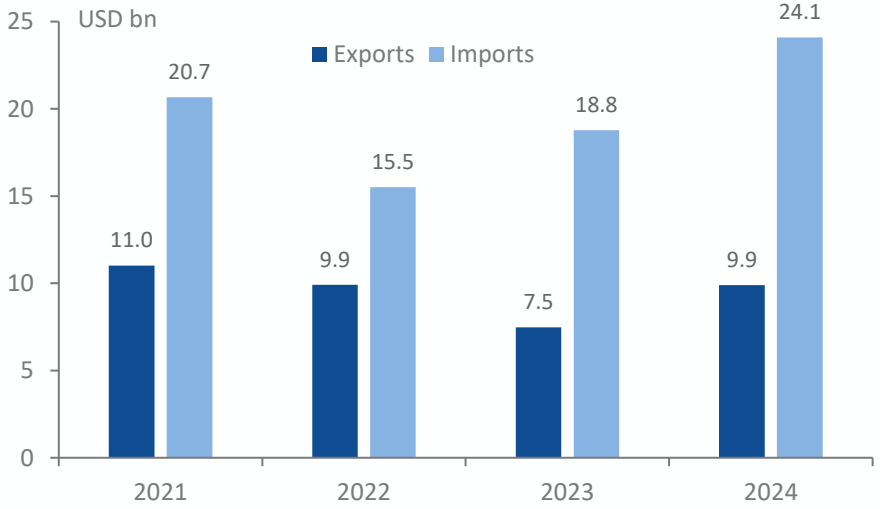
Counterfactual scenario analysis: Scenario 2

Counterfactual volume of road-based trade with EU



Source: own calculations.

Counterfactual value of road-based trade with EU



Source: own calculations.

- Counterfactual scenario 2: No Agreement – Status Quo Permit Regime
  - No agreement, same number of permits as in 2021 (592K permits),
  - No additional liberalization occurs
- Assumptions:
  - each permit moves ~21.9 tonnes (based on 2021 average). This limits road trade capacity to approx. 13 mt annually
  - Export/import shares and trade values are calculated using factual price and structure by year
- Estimated outcome (2024):
  - Exports: volume would have been 6.74 Mt (vs. 7.53 Mt factual), value USD 9.9 bn (vs. USD 11.1 bn factual), -11% in value
  - Imports: volume would have been 6.2 Mt (vs. 6.97 Mt factual), value USD 24.1 bn (vs. USD 26.9 bn factual), -10% in value
- **The lower permit ceiling further constrains Ukraine's trade potential.**
- **Both exports and imports face comparable losses due to constrained road capacity.**

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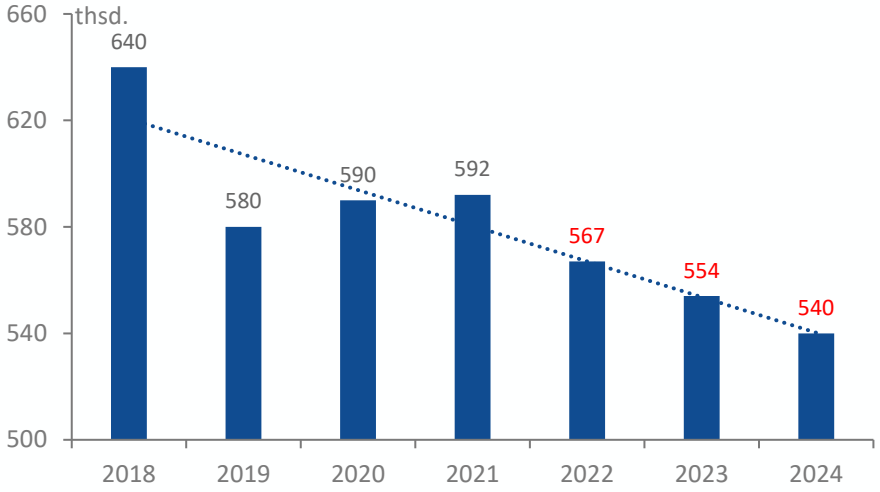
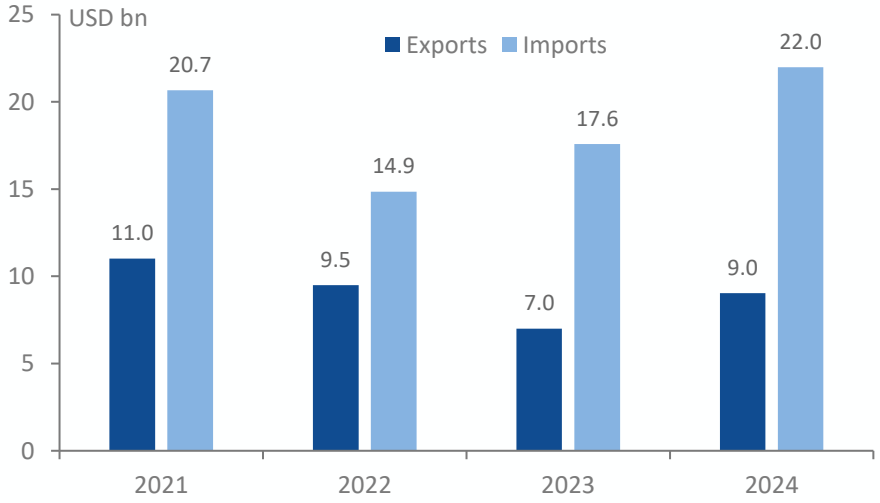
Counterfactual scenario analysis: Scenario 3

Extrapolation of number of permits for Scenario 3



Source: Own display based on DSBT for permit allocation in 2018-2021, own extrapolation for 2022-2024.

Counterfactual value of road-based trade with EU



Source: own calculations.

- Counterfactual scenario 3: Declining Permit Quotas – Pre-War Trend Continues
  - No agreement, number of permits declining based on the 2018–2021 trend,
  - No liberalization occurs
- Assumptions:
  - Permit at ~21.9 tonnes (based on 2021 average) → declining road trade capacity
  - Export/import shares, trade values are calculated using factual price, structure
- Estimated outcome (2024):
  - Exports: volume would have been 6.15 Mt (vs. 7.53 Mt factual), value USD 9.0 bn (vs. USD 11.1 bn factual), -19% in value
  - Imports: volume would have been 5.7 Mt (vs. 6.97 Mt factual), value USD 22.0 bn (vs. USD 26.9 bn factual), -18% in value

- A continued permit decline sharply limits Ukraine's road-based trade.
- Without reform, permit constraints would have reduced exports and imports by nearly 20% in 2024.
- Trade suppression grows over time as quotas fall further behind demand.

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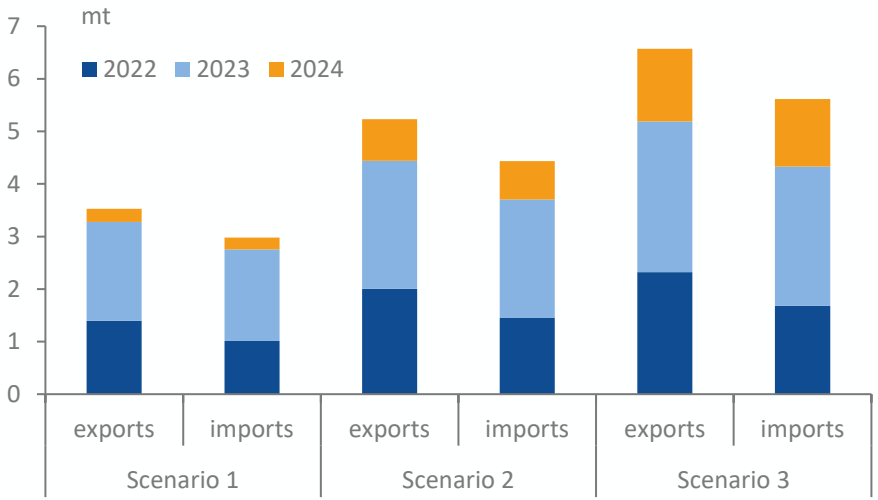
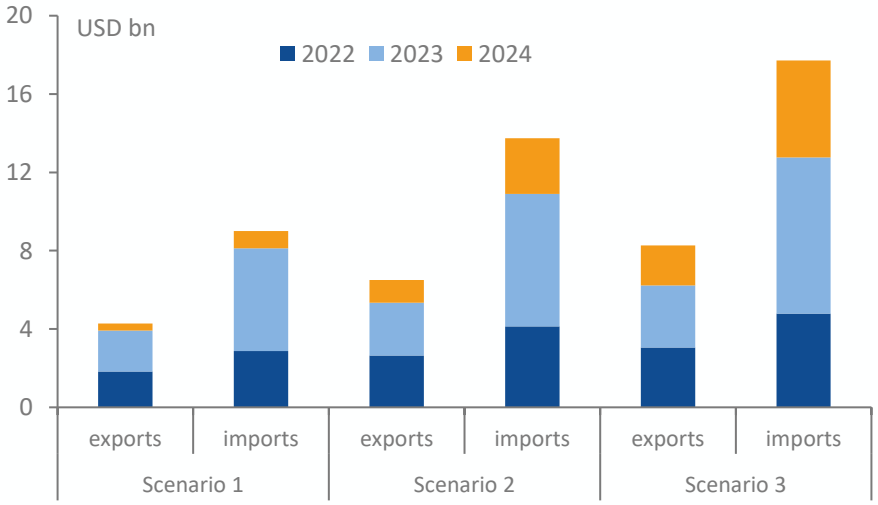
Scenario analysis: losses

Counterfactual losses in road-based trade volumes with EU



Source: own calculations.

Counterfactual losses in road-based trade value with EU



Source: own calculations

- Losses in trade volumes: difference between trade volumes in each of the scenarios and the actual volumes.
- Losses in trade values: product of volume losses for each scenario and each year and the value per Mt transported that year.
- Solidarity Lane had moderate impact on Ukraine-EU trade in 2022, large impact in 2023 and low impact in 2024
- **Export reorientation:**
  - Ukraine's shift from CIS to EU markets began after 2014 but accelerated after 2022; EU's share of trade exceeded 65% by 2023
  - Solidarity Lane enabled Ukraine's rapid export reorientation amid war disruptions
- **Without the Solidarity Lanes, road-based trade values between the EU and Ukraine would have been (cumulatively 2022-2024):**
  - USD 13.3 bn lower under scenario 1 (8% of factual total trade with EU)
  - USD 20.2 bn lower under scenario 2 (12%)
  - USD 26.0 bn lower under scenario 3 (15%)

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Results

	Baseline	Scenario 1	Scenario 2	Scenario 3
Losses in volume of road-based trade with EU cum. 2022-24, mt	0	6.5	9.7	12.2
Losses in value of road-based trade with EU, USD bn, cum. 2022-24	0	13.3	20.2	26
Truck queues	Mitigated by eCherha	Improved over time, but uneven flow	Physical queues likely persistent	Artificially low traffic, system underutilized
Permit regime	No permits	2018 expanded quotas	2021 quotas	Quotas decline yearly
Macroeconomic Implications	Trade enabled; logistics supported economy	Partial trade suppression; moderate risk	Trade losses limit recovery potential	Trade bottlenecks amplify recession pressure
Logistics sector (UA and EU)	Growth, job retention in Ukraine	Mixed; UA firms gain, EU truckers less alarmed	Collapse of Ukrainian road freight capacity	Underemployment in UA transport, shadow markets

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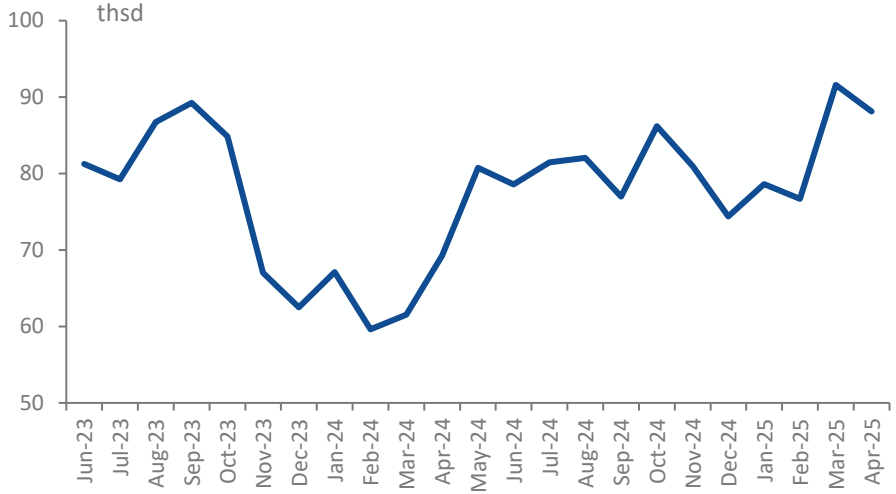
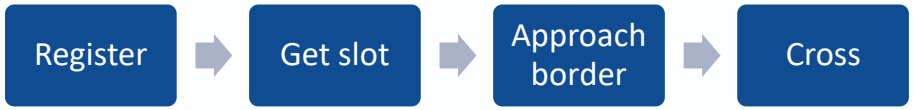
6. Impact of eCherha information service

Number of border crossings registered in eCherha



Source: Own display based on Cherha https://echerha.gov.ua/en/statistics

How eCherha works



Source: own display, Note: Efficiency estimates are based on anecdotal operator reports and public stakeholder statements. No official average time series is available pre-eCherha.

- Introduced in Nov-22, eCherha is a digital queue system that assigns time slots for outbound truck crossings.
- It is also the first tool to systematically track border throughput and waiting times
- Sharp rise in border crossings since late 2022, sustained into 2023–2024
- **Efficiency gains (based on informal interviews and user feedback):**
  - Average border wait time fell by 30–40% at high-traffic checkpoints (e.g. Yahodyn, Krakivets) compared to mid-2022 estimates prior to eCherha
  - Truck turnaround time improved by 1–2 days for many exporters vs. ad hoc queues before eCherha
- **Strategic relevance:**
  - Helped Ukraine double border throughput with only moderate delays
  - Aligned with EU's TEN-T goals for smart border management
  - Key enabler of the permit-free regime's effectiveness
  - Increased predictability and transparency

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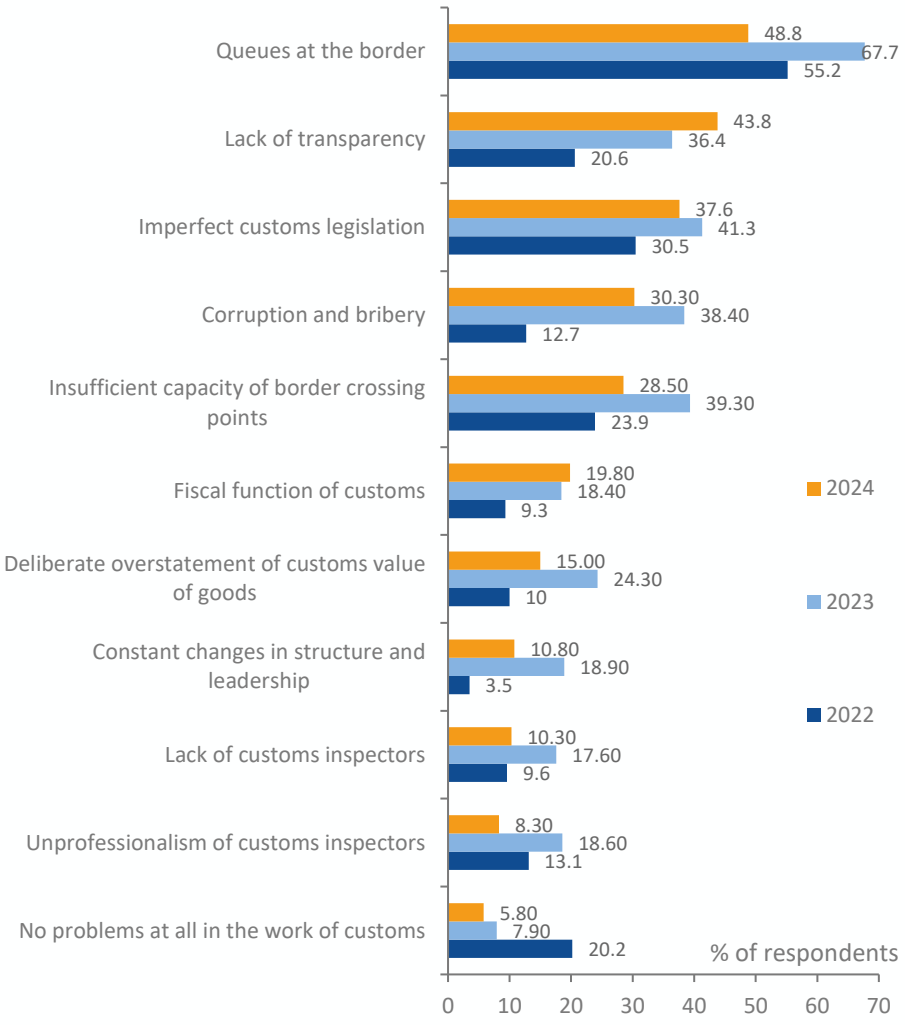
6. Impact of eCherha information service

Main problems in the work of customs (according to exporters and importers)



Source: Own display based on IER Survey, "9th Annual Survey of Importers and Exporters" (400 enterprises) http://www.ier.com.ua/en/proekt_dilova_dumka/survey

- Despite still topping the list of customs-related problems, fewer exporters and importers flagged border queues in 2024:
  - 48.8%, down from 67.7% in 2023 and 55.2% in 2022
  - a 19-point drop signals visible progress
- Also, problem of insufficient capacity of border crossing was less frequently mentioned in 2024 compared to 2023
- Businesses confirm that time and cost of border procedures remain key pain points, but importance of these issues has declined,
- In contrast, expectations for better equipment and stronger security remain high and unchanged from 2023.
- "No problems at all" has however been decreasingly responded

- **The eCherha system has measurably reduced delays, contributing to improved customs performance and business satisfaction.**
- **Still, there are measures and reforms needed to improve the work of customs**

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7. Policy recommendations and conclusion

- The liberalization of road transport between Ukraine and the EU helped maintain trade flows during wartime, despite disrupted seaports and damaged infrastructure.
- Without this agreement, Ukraine's road-based trade with the EU would have dropped by up to 15% (2022–2024), undermining wartime economic resilience for Ukraine while also damaging EU exports to Ukraine.
- The Solidarity Lanes initiative, backed by infrastructure investments and innovations like eCherha, helped absorb redirected flows and mitigate infrastructure bottlenecks.
- Recommendations:
  - Maintain permit-free regime until Ukraine's full EU accession
  - Align Ukrainian driver/work standards with EU mobility package
  - Invest in digital border solutions (e.g. eCherha → EU-wide pilot).
  - Further extend domestic measures and reforms as well as cross-border and international cooperation to improve the work of customs

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About the German Economic Team

Financed by the Federal Ministry for Economic Affairs and Climate Action, the German Economic Team (GET) advises the governments* of Ukraine, Belarus, Moldova, Kosovo, Armenia, Georgia and Uzbekistan on economic policy matters. Berlin Economics has been commissioned with the implementation of the consultancy.

**Within the framework of project activities in Georgia, we are in contact solely with reform-oriented partners for the time being; in Belarus advisory activities are suspended*

CONTACT

Garry Poluschkin, Project Manager Ukraine
poluschkin@berlin-economics.com

German Economic Team
c/o BE Berlin Economics GmbH
Schillerstraße 59 | 10627 Berlin
Tel: +49 30 / 20 61 34 64 0
info@german-economic-team.com
www.german-economic-team.com

Our publications are available under
https://www.german-economic-team.com/ukraine

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