



Ukraine's exports to Kazakhstan. Impact of transit restrictions through Russia

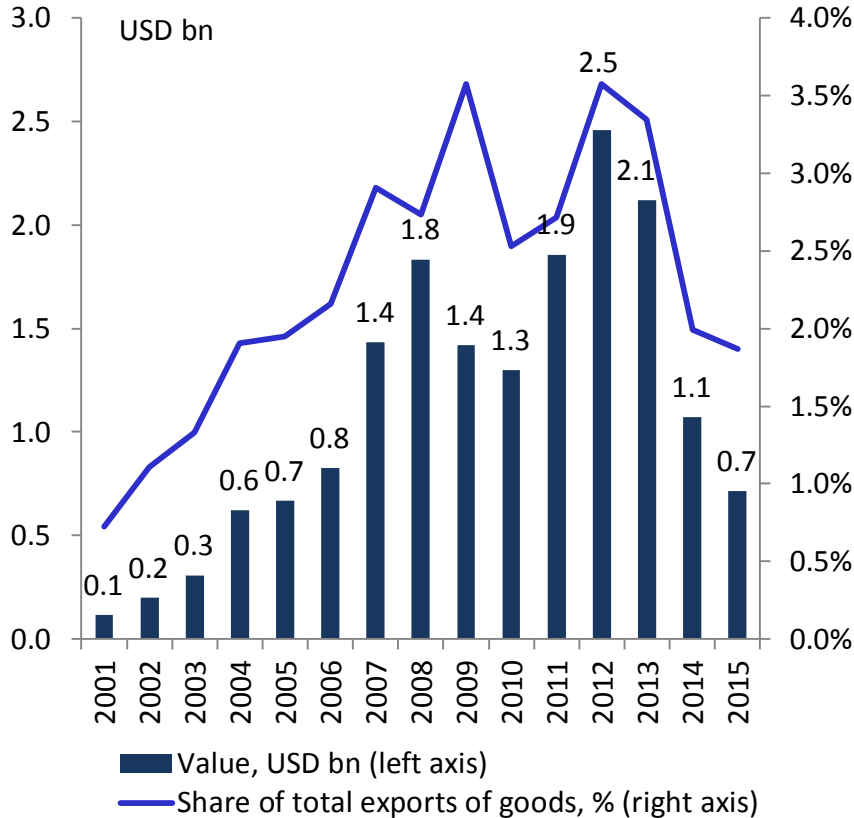
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German Advisory Group in cooperation with the IER Kyiv

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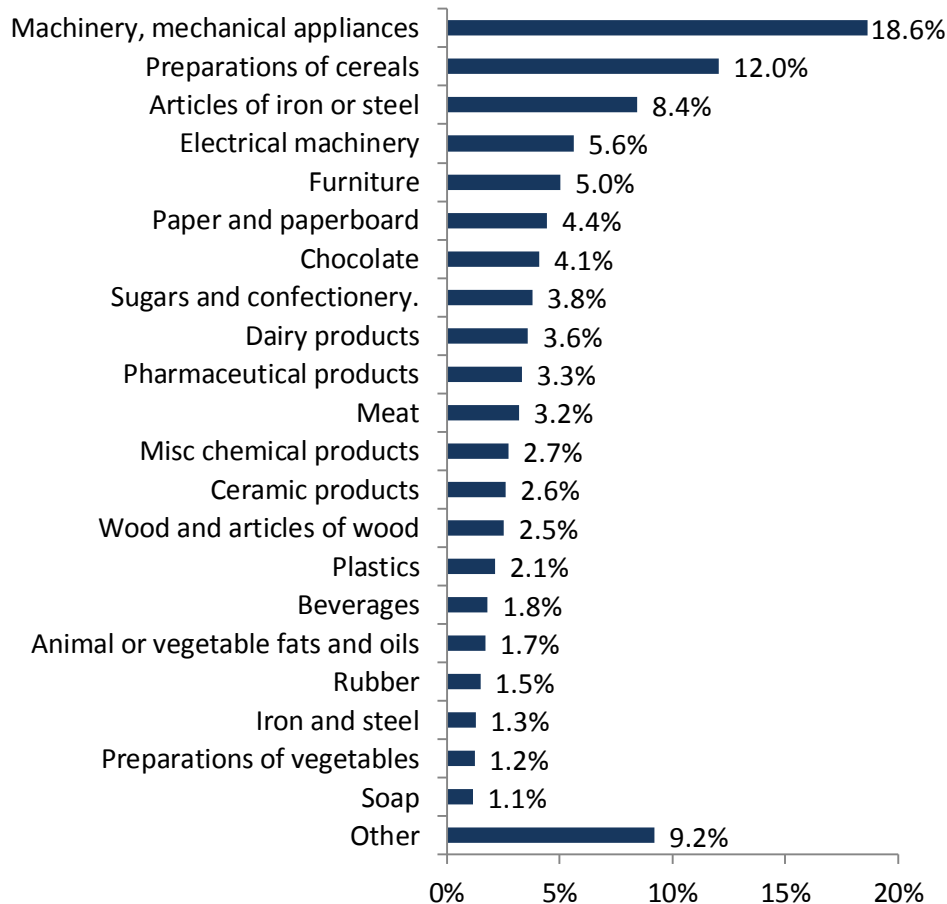
Note: only exports of goods is considered.

Source: State Statistics Service of Ukraine

- **Absolute terms.** In 2015, Ukrainian exports of goods to Kazakhstan amounted to USD 0.7 bn; this is significantly less than USD 2.5 bn in 2012
- **Relative terms.** The share of Kazakhstan in Ukraine's exports of goods decreased from 3.6% in 2012 to 1.9% in 2015
- **Importance.** Despite the decline in absolute and relative terms, Kazakhstan remains an important destination for Ukrainian exports; USD 0.7 bn of exports amount to 0.8% of GDP

Structure of exports to Kazakhstan

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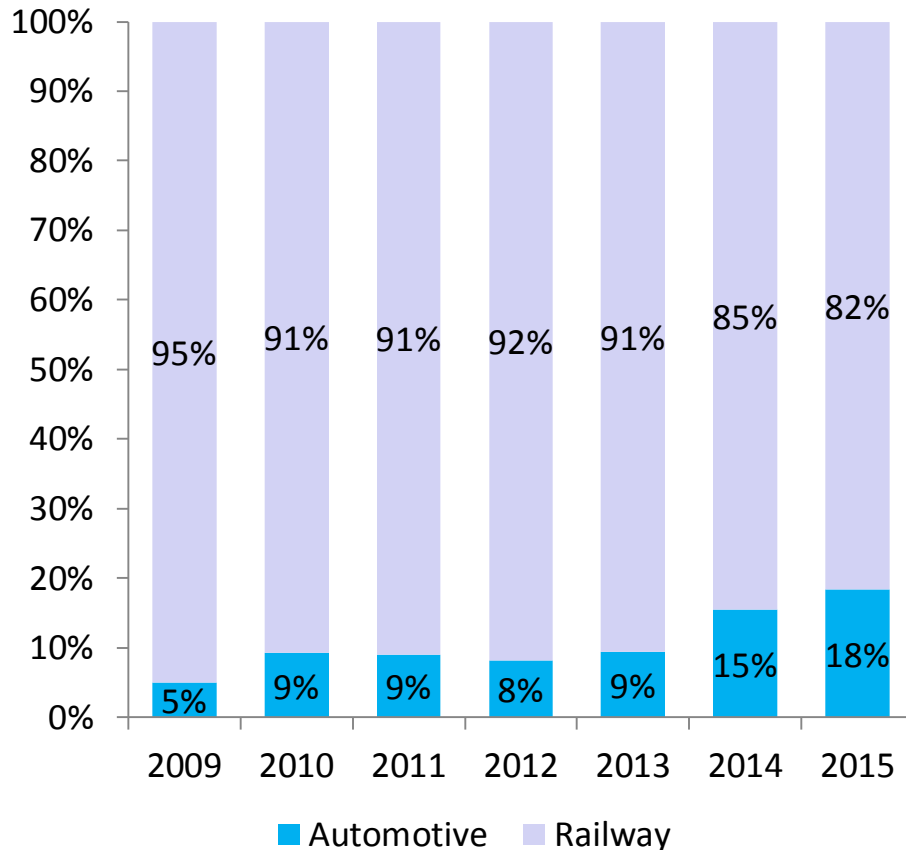
- Ukraine's exports to Kazakhstan are rather diversified; no clear dominance by one single product group
- Main categories in 2015:
 - Machinery
 - Food products
 - Metals
 - Paper and articles of wood
 - Chemicals

Note: only exports of goods is considered, reporting year is 2015

Source: State Statistics Service of Ukraine

Modes of transportation

Exports to Kazakhstan by the mode of transportation



- In 2015, Ukraine exported to Kazakhstan 471 thousand tons of cargo; this is a decline of 24.5% yoy
- Transportation by railways is the dominant mode of goods shipment to Kazakhstan
- The share of road transport has increased since 2009 and reached 18% in 2015

Source: State Statistics Service of Ukraine

Russian legislation imposing restrictions on transit

- **1 January 2016:** A decree by the President of the Russian Federation bans direct transit of Ukrainian goods to Kazakhstan through Russia
- **However:** Russia offers the use of an indirect transit route
 - Automotive and railway transportation of goods from the territory of Ukraine to the territory of Kazakhstan can be transported through the territory of Belarus
 - All the trucks and rail cars should be issued identifying seals equipped with GLONASS at the Russia-Belarus border
 - These provisions are in force from 11 January 2016 to 1 July 2016

Two alternatives routes: Belarus and New Silk Road

Baseline: Through Russia

- Distance is 3,432 km for trucks, 3,686 km for trains (Kyiv-Astana)
- Time is 6-7 days for trucks, 5.5 days for trains

Alternative 1: Through Belarus (as offered by Russia)

- Distance increase: ca. 600 km (ca. 17% for Kyiv-Astana)
- Time increase: for trucks 1-2 days; for rail 1 day
- Main problem: Transit through Russia remains vulnerable to further political disruptions (e.g. in mid-February Russia temporary banned Ukraine's truck transit)
- Also: It might require the usage of Belarusian or Russian carriers for road transport

Alternative 2: “New Silk Road” (as favoured by the Ukrainian government)

- Route: Black Sea, Georgia, Azerbaijan and Caspian Sea
- Intermodal container route using ferries and rail transport
- Distance increase: ca. 1900 km (ca. 55% increase for Kyiv-Astana)
- Time increase: for trucks 6-7 days, for rail 5 days or more depending on weather
- Capacity may be constrained due to limited ferries at both seas

Cost increase for alternative routes

	Cost increase RAIL	Cost increase TRUCK
Belarus Route	568 USD/FEU	500 USD/FEU
New Silk Road	1,832 USD/FEU If tariffs are reduced: 1,032 USD/FEU	1,860 USD/FEU

Source: Own calculations

Note: Cost is for Kyiv-Astana

FEU = 40 ft equivalent container (1 train car or 1 truck, could also carry two 20 ft equivalent (TEU) containers)

- **Belarus route:** Additional cost due to longer trip (rail and truck), convoy charges and charges for extra driver (truck)
- **New silk road:** Additional costs due to ferry charges, longer trip (rail and truck), extra fuel and driver/truck costs (truck)
- For the **new silk road** we calculate a scenario with cheaper ferry and rail tariffs; intergovernmental negotiations on this issue are currently taking place

New silk road: Current capacities

Current capacities and short-term plans

- Black Sea
 - Currently 5 ferries operate on multiple Black Sea routes
 - 5 days for Chonomorsk/Ilychevsk-Poti round-trip
 - Capacity: 3 ships per 50 rail cars plus 50 trucks
2 ships per 108 rail cars
 - On top: Ukrzaliznytsia plans to start operating 2 additional ferries per 108 rail cars in Spring 2016
- Caspian Sea
 - 5 ferries on Baku-Aktau route
 - 2.5 days for round-trip
 - Capacity: 2 ships per 54 rail cars
3 ships per 52 rail cars and 44 trucks
 - On top: Caspar is expected to launch 2 new ferries per 54 rail cars in 2017

New silk road: Capacity constraints

Estimated free capacity on new silk road bottlenecks

	Free capacity, thsd tons
Black Sea, current state	395
Black Sea, incl. <u>three</u> additional ferries	862
Caspian Sea, current state	562
Caspian Sea, incl. <u>two</u> additional ferries	869

Source: Own calculations

Note: we assume that three ferries could be added at the Black Sea (UZ currently plans to add two ferries)

- 2015 volume of exports from Ukraine, in thsd tons
 - Central Asia (excl. Kazakhstan): 388
 - Kazakhstan: 471
 - Total: 859
- **Black Sea is current bottleneck:** Free capacity of 395 thsd tons only covers **46%** of Ukrainian exports to Central Asia (859 thsd tons)
- **Thus:** New silk road has significant capacity constraints
- Once additional ferries are operating in both the Black Sea and the Caspian Sea:
 - Enough free capacity at Black Sea: 862 thsd tons > 859 thsd tons
 - Enough free capacity at Caspian Sea: 869 thsd tons > 859 thsd tons

Seven scenarios

- We set **seven scenarios** to estimate the impact of the ban on direct transit on Ukrainian exports to Kazakhstan
- Scenario 1: Transit is redirected through Belarus only
- Scenarios 2-7: Transit is redirected through new silk road only

Scenario	Tariffs	Capacity at Black Sea	Capacity at Caspian Sea
Scenario 2	Current	Current	Current
Scenario 3	Reduced	Current	Current
Scenario 4	Current	+ 3 ferries	Current
Scenario 5	Reduced	+ 3 ferries	Current
Scenario 6	Current	+ 3 ferries	+ 2 ferries
Scenario 7	Reduced	+ 3 ferries	+ 2 ferries

Assumptions

- We assume that exports to Kazakhstan will use capacity proportionately to Kazakhstan's share in Ukraine's exports to Central Asia.
- Capacity constraint for the whole New Silk Road is set using the lower total capacity among Black and Caspian seas.
- For standardization purposes, all the exports is assumed to be shipped by railway transports using FEU containers.

Scenario 1: Belarus Route

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 13.4 m
Due to capacity constraint	USD 0.0 m
Capacity constraint	0 thsd tons
Total effect	USD 13.4 m
Total effect, in %	1.9%
Total effect, % GDP	0.02%

Source: Own calculations

- Transport costs are expected to increase in average from 15% to 20% of the cost of exported products
- Aggregate loss in exports to Kazakhstan amounts to:
 - 1.9% of current exports to Kazakhstan
 - USD 13.4 m per year
 - 0.02% of GDP

Thus: Low expected impact, due to lack of capacity constraints

- Risks:
 - Delays and uncertainty
 - Temporary closure of the route cannot be excluded

S2: Current tariffs, current capacity Black & Caspian Sea

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 19.9 m
Due to capacity constraint	USD 385.5 m
Capacity constraint	216.7 thsd tons
Total effect	USD 405.3 m
Total effect, in %	56.8%
Total effect, % GDP	0.46%

Source: Own calculations

- Transport costs are expected to increase in average from 15% to 32% of the cost of exported products
- Bottleneck: Capacity constraint at the *Black Sea*
- Aggregate loss in exports to Kazakhstan amounts to:
 - USD 405.3 m
 - 56.8% of current exports to Kazakhstan
 - 0.46% of GDP

Thus: Very strong effect mainly due to heavy capacity constraints

- Risk: Weather conditions could bring additional costs and time losses

S3: Lower tariffs, current capacity Black & Caspian Sea

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 11.2 m
Due to capacity constraint	USD 385.5 m
Capacity constraint	216.7 thsd tons
Total effect	USD 396.7 m
Total effect, in %	55.6%
Total effect, % GDP	0.45%

Source: Own calculations

- Aggregate loss in exports to Kazakhstan amounts to:
 - USD 396.7 m
 - 55.6% of current exports to Kazakhstan
 - 0.45% of GDP
 - Export losses USD 9 m less than in Scenario 2
 - Thus: Lower tariffs provide some relief
 - But they do not solve the problem, since exports losses remain massive
- Thus:** Lower tariffs help, but they don't solve the problem

S4: Current tariffs, capacity Black Sea +3, current capacity Caspian Sea

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 28.2 m
Due to capacity constraint	USD 246.8 m
Capacity constraint	308.3 thsd tons
Total effect	USD 275.0 m
Total effect, in %	38.5%
Total effect, % GDP	0.31%

Source: Own calculations

- Transport costs are expected to increase in average from 15% to 32% of the cost of exported products
- Now, the *Caspian Sea* becomes the bottleneck
- Aggregate loss in exports to Kazakhstan amounts to:
 - USD 275.0 m
 - 38.5% of current exports to Kazakhstan
 - 0.31% of GDP (2015)
- **Thus:** Increase in capacity on the Black Sea helps, but does not solve the fundamental problem; need to also tackle the Caspian Sea capacity

S5: Lower tariffs, capacity Black Sea +3, current capacity Caspian Sea

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 15.9 m
Due to capacity constraint	USD 246.8 m
Capacity constraint	308.3 thsd tons
Total effect	USD 262.7 m
Total effect, in %	36.8%
Total effect, % GDP	0.30%

Source: Own calculations

- Aggregate loss in exports to Kazakhstan amounts to:
 - USD 262.7 m
 - 36.8% of current exports to Kazakhstan
 - 0.30% of GDP (2015)
- **Thus:** Lower tariffs do help (see for comparison Scenario 4), but they do not solve the problem, as the decrease in exports remains massive

S6: Current tariffs, capacity Black Sea +3 & Caspian Sea +2

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 43.2 m
Due to capacity constraint	USD 0.0 m
Capacity constraint	472.5 thsd tons
Total effect	USD 43.2 m
Total effect, in %	6.0%
Total effect, % GDP	0.05%

Source: Own calculations

- Transport costs are expected to increase in average from 15% to 32% of the cost of exported products
- No more bottlenecks on the seas
- Aggregate loss in exports to Kazakhstan amounts to:
 - USD 43.2 m
 - 6.0% of current exports to Kazakhstan
 - 0.05% of GDP (2015)

Thus: Increase in capacity on both seas does practically solve the problem; decline in exports becomes manageable

S7: Lower tariffs, capacity Black Sea +3 & Caspian Sea +2

Expected exports decrease

Effect	Magnitude
Due to higher freight cost	USD 24.3 m
Due to capacity constraint	USD 0.0 m
Capacity constraint	472.5 thsd tons
Total effect	USD 24.3 m
Total effect, in %	3.4%
Total effect, % GDP	0.03%

Source: Own calculations

- Transport costs are expected to increase in average from 15% to 25% of the cost of exported products
- Aggregate loss in exports to Kazakhstan is equivalent to:
 - USD 24.3 m
 - 3.4% of current exports to Kazakhstan
 - 0.03% of GDP (2015)

Thus: Scenario 7 is comparable to Belarus route (Scenario 1), and political risks of disruptions are much lower

→ **Scenario 7 is the best case scenario.**

Overview of all 7 scenarios

Route	Scenario	Binding capacity	Effect, USD m	Effect, % GDP
Belarus	S1	--	13.4	0.02
New Silk Road	S2: Current tariffs, current capacity at Black and Caspian Sea	yes	405.3	0.46
	S3: Reduced tariffs, current capacities at Black and Caspian Sea	yes	396.7	0.45
	S4: Current tariffs, capacity Black Sea + 3 ferries, current capacity Caspian Sea	yes	275.0	0.31
	S5: Reduced tariffs, capacity Black Sea +3 ferries, current capacity Caspian Sea	yes	262.7	0.30
	S6: Current tariffs, capacity at Black Sea +3 ferries and Caspian Sea +2 ferries	no	43.2	0.05
	S7: Reduced tariffs, capacity at Black Sea +3 ferries and Caspian Sea +2 ferries	no	24.3	0.03

Source: Own calculations

Conclusions

- Exports to Kazakhstan are important, despite some decline in recent years
- If the Belarus Route (S1) works smoothly, the impact of Russian transit restrictions on Ukrainian exports to Kazakhstan will be rather limited
- If Ukrainian firms have to rely only on the New Silk Road at current conditions, exports to Kazakhstan would decrease by 57% (0.46% of GDP)
- This massive loss can only be avoided if capacities on both the Black and the Caspian Sea are increased
- Lower transport tariffs in the Caucasus would help, but not solve the problem
- In case of higher capacity on the Black and Caspian Sea, coupled with lower tariffs (S7), the reduction in exports to Kazakhstan will be very limited and comparable to those while using the Belarus Route (S1)
- **Policy recommendation: S7 should be the clear policy goal of the Ukrainian government. As long as the capacity extension is not concluded, diplomacy should be used to try to secure a “smooth” Belarus route. Support from international partners and IFIs can help to achieve both goals**



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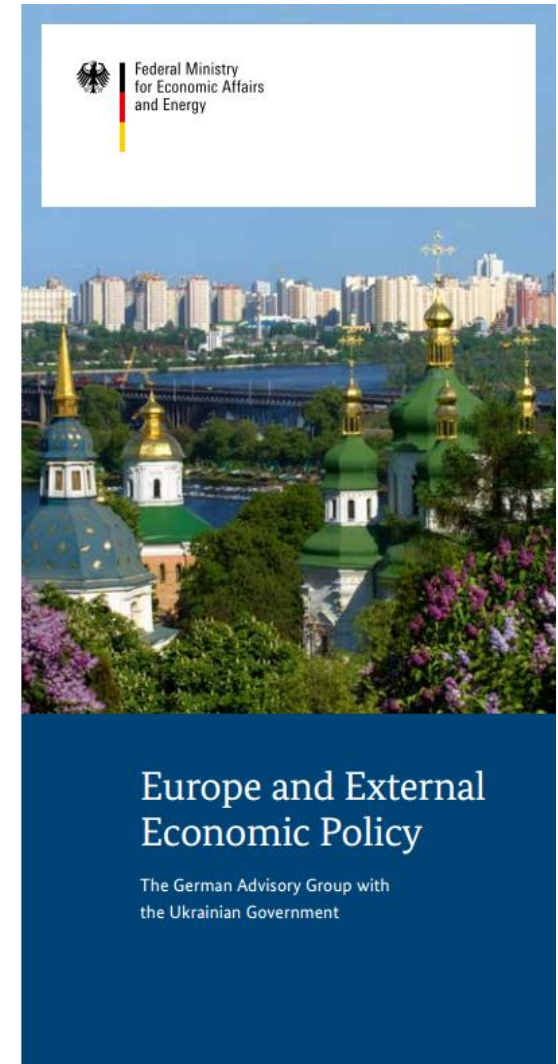
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Assumptions of capacity calculations

	# Ferries	# FEU per ferry	max roundtrips per year	total capacity, t	free capacity, t
Black Sea current	5	2 – 108 3 – 50	72	527,040	395,280
Black Sea additional	8	5 – 108 3 – 50	72	993,600	861,840
Caspian Sea current	5	2 – 54 3 – 52	142	749,760	562,320
Caspian Sea additional	7	4 – 54 3 – 52	142	1,056,480	869,040

Assumptions:

Current trade UA-GE/AZ only partly using NSR container route (much of it probably on conventional cargo ships)

All present trade UA-Central Asia will be changed to intermodal container transport on NSR

We take into account only capacity for rail cars

Average load of FEU: 20t

Current capacity usage of ferries: 25% (Result of expert interviews, but not possible to verify!)

Capacity at port facilities is not binding

Number of roundtrips is in case of no delays due to ineffective procedures

Two new ferries at the Black Sea in spring 2016, one additional ferry could be added if needed

Two new ferries at the Caspian Sea since 2017

New capacity is calculated as capacity of additional ferries plus previously free capacity