

Running wartime economy in Ukraine – May 2022

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1. BREAKING SUPPLY CHAIN AND LOGISTICS

LOSS OF PRODUCTION CAPACITIES

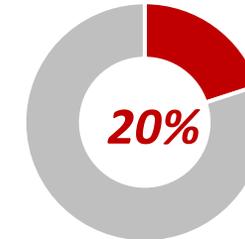
- Ukraine has lost part of its physical production capacities due to active warfare and occupation of territories
- The inability to produce causes (1) decrease in Ukraine's exports, and (2) breaking of internal supply chains.
- Loss of production capacities cascades into the decrease of production in connected industries.

BLOCKADE OF SEA PORTS

- 71% of Ukraine's exports were delivered by sea/water in 2021

INTERRUPTIONS IN DOMESTIC AND IMPORTS LOGISTICS

- Infrastructure capacities including roads, railways, storage facilities are destroyed in the warfare.
- Risks of further hitting infrastructure are high.
- Railways and automobile transportation capacities are the bottleneck.
- Deficit of fuel caused damage to storage infrastructure and logistics bottlenecks contributes to deeper logistics crisis.
- As the result, import of important inputs as well as delivering goods domestically are difficult and costly hindering business operations.



Share in GDP (2020) of six regions in active warfare as of April 2022
Source: NBU, Ukrstat

-30%

Estimated decrease in electricity consumption
Source: NBU

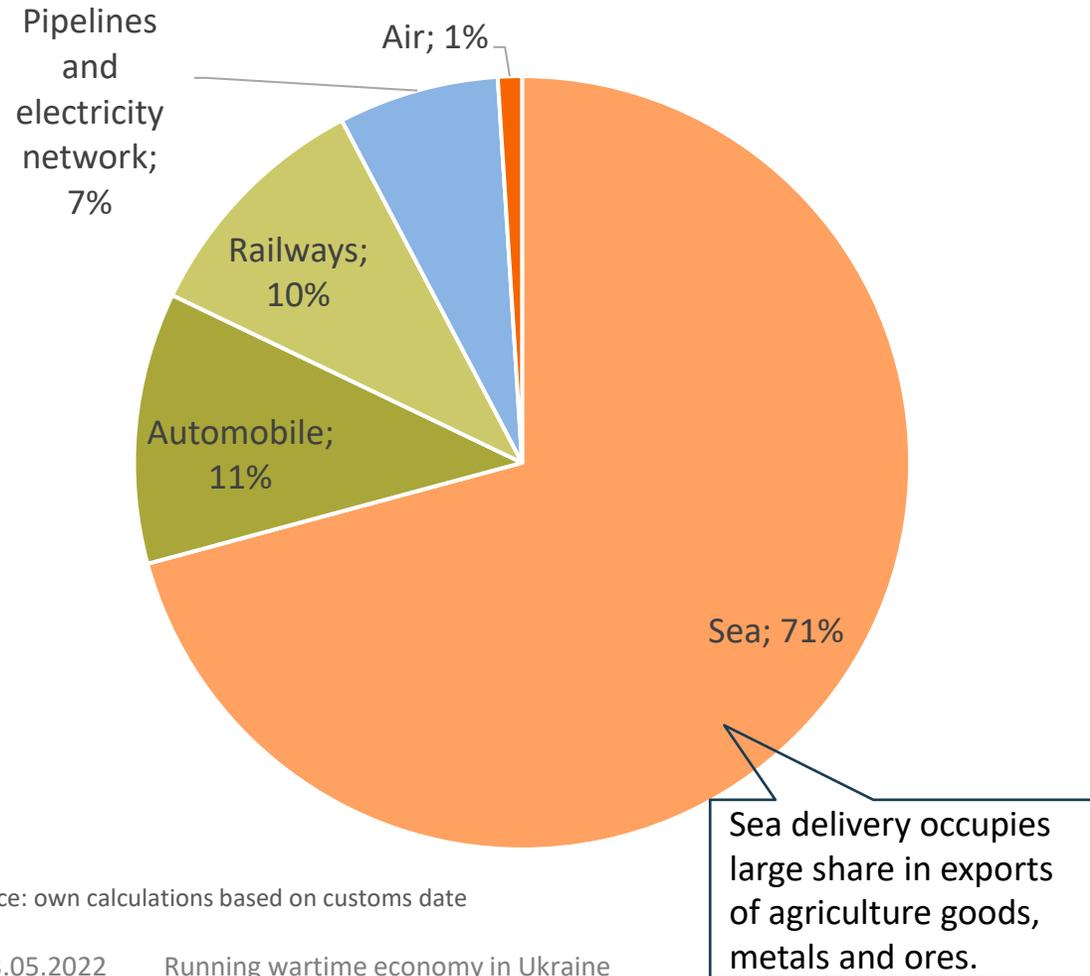
-59%

Decrease in export physical volume in March 2022 to March 2021
Source: Ukrstat

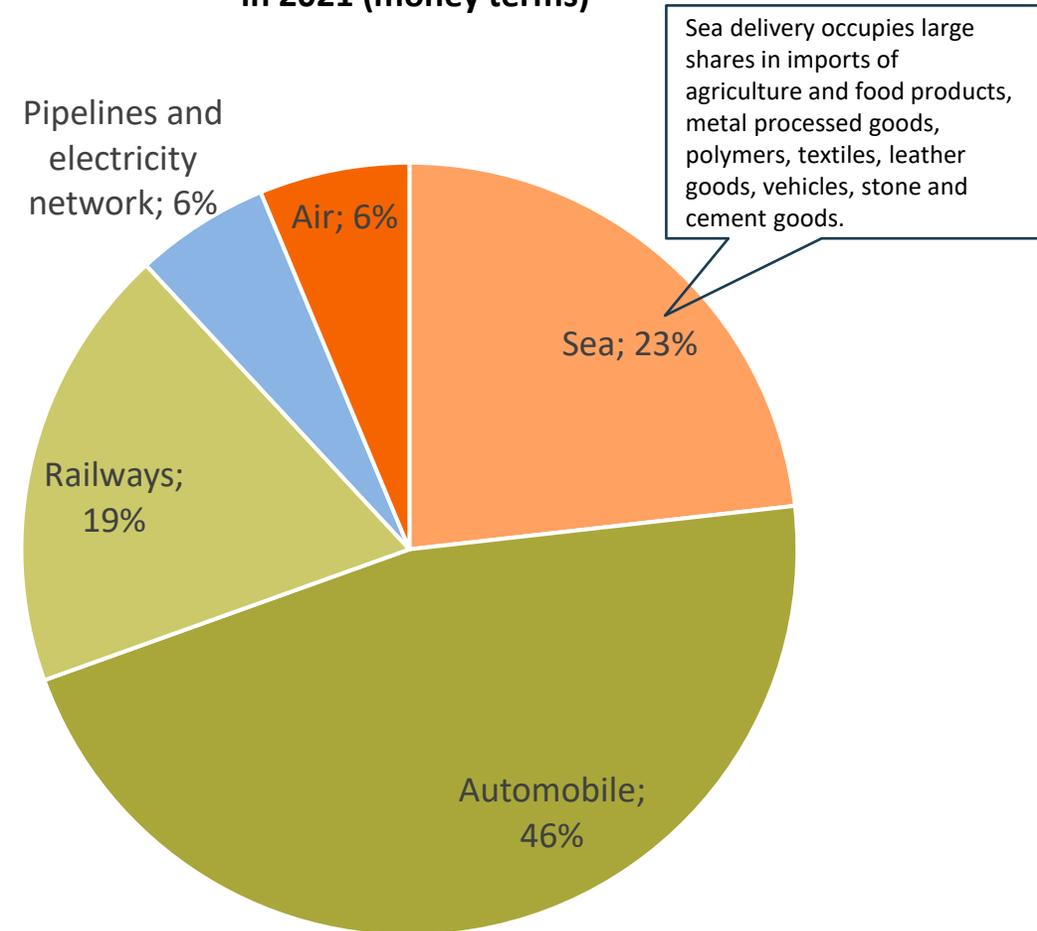
Key channels of war impact on Ukraine's economy (2/3)

Impact of seaport blockade

Distribution of Ukraine's exports by means of transportation in 2021 (money terms)



Distribution of Ukraine's imports by means of transportation in 2021 (money terms)



Source: own calculations based on customs data

Key channels of war impact on Ukraine's economy (3/3)

2. MISALLOCATION OF LABOR RESOURCES

- About half of people aged 18-60 years old who lived in urban areas have left their usual places of residence and work. Not all of them are able to work remotely.
- Employers in industrial manufacturing, particularly those in regions close to active warfare, are not able to gather workers due to risks of hitting.
- In some industries, including agriculture, employers face lack of workers who have been mobilized to military.

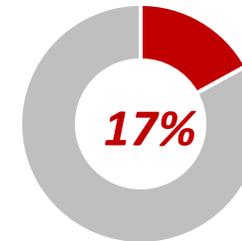
3. UNCERTAINTY AND HIGH RISKS

- Businesses and consumers are not able to plan for long-run.
- Development and investment are put on the hold.
- Some businesses may fully stop their operations due to uncertainty.

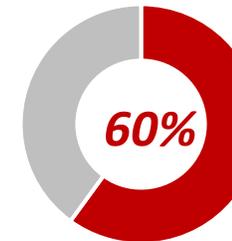
4. PRESSURE ON GOVERNMENT FINANCE

- Government needs to increase spending for the support of military forces, vulnerable groups, repairing of critical infrastructure while revenue inflow is drying up.

10% of enterprises surveyed by NBU complained about lack of labor. This reason is #4 in frequency of mentions after loss of sales market, broken logistics and warfare



Share of enterprises surveyed by NBU that stopped operations as of April 2022



Share of enterprises surveyed by NBU that continue operating, but under lower capacity than before the war, as of April 2022

Source: NBU survey of 524 enterprises, 18-22.04.2022

Immediate economic consequences of war

1. INABILITY FOR THE EFFICIENT ALLOCATION OF RESOURCES:

- Inability to utilize economies of scale due to logistics risks (for instance, risks to have large centralized storage facilities).
- Difficulties to allocate and use human resources, particularly, in industrial manufacturing.
- As the result, production costs are rising.

2. DECREASE IN CONSUMER DEMAND

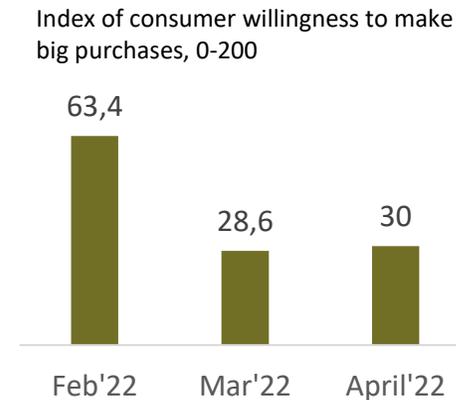
- Due to uncertainty, decrease in income and long-term unemployment risks, consumers are cautious in their spending.
- Consumer demand is limited to basic needs.

3. LIMITED ENTREPRENEURSHIP OPPORTUNITIES DUE TO HIGH RISKS AND UNCERTAINTY.

4. FISCAL DEFICIT.

5. PRESSURE ON LOCAL CURRENCY.

6. INFLATION ACCELERATION DUE TO HIGHER PRODUCTION COSTS.



Index of consumer willingness to make big purchases dropped significantly. The previous historic minimum was recorded in April 2020 at the outbreak of COVID-19 (index was 45).
Source: Info Sapiens

5 billion

UAH

Monthly financing need of the central budget

16%

Year average inflation in April 2022

Resources and expenses of economic agents.

Losses of the whole economy

RESOURCES OF ECONOMIC AGENTS

- 2021 was the good year for the Ukrainian economy, households and businesses have savings for the support during first months of the war
- Businesses spent savings to support employees and to finance re-launch of operations
- Banking system is sustainable and liquid and potentially able to support businesses with lending
- Savings of individuals on bank accounts increased
- Government received support from international organizations

EXPENSES OF ECONOMIC AGENTS (FLOW)

- New sales and revenue inflow of businesses decreased significantly.
- Consequently, tax revenue is shrinking.
- Staff layoffs due to lower sales will lead to unemployment and loss of household income.

LOSSES OF THE ECONOMY (STOCK)

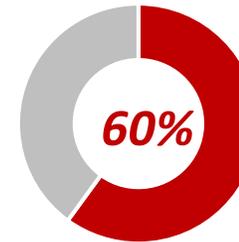
- Loss of assets (including arable land, harvest of the previous season) on temporarily occupied territories.
- Loss of physical assets in production and infrastructure due to warfare.
- Risks of “de-industrialization” of Ukraine.

+12%

Increase in balance of households’ current and savings’ bank accounts in March 2022 vs. March 2021. Source: NBU
The increase is observed in current accounts due to wage payments which were made ahead by some of employers

+2%

Increase in balance of businesses’ current and savings’ bank accounts in March 2022 vs. March 2021. Source: NBU



Share of enterprises surveyed by NBU that continue operating, but under lower capacity than before the war, as of April 2022
Source: NBU

**97.4
billion
USD**

Estimated loss of infrastructure as of May 19
Source: KSE

“DOWN SCALING” OF BUSINESSES:

- Reducing range of delivered goods and services to those which are most demanded and/or require lower production cost.
- “De-scaling” of logistics: logistics in smaller volumes, “just in time” with limited storage.
- Putting on hold big investment projects.

REACTING TO NEWLY EMERGING NEEDS AND OPPORTUNITIES:

- Goods and services to meet military needs.
- New business opportunities due to restructuring of logistics (increasing importance of automobile transportation).
- Needs to repair and recover housing and infrastructure (opportunities in construction).

SEARCHING FOR THE NEW CHANNELS OF EXPORT LOGISTICS TO OVERCOME BLOCKADE OF SEAPORTS

Implications of “down scaling”:

- Large businesses provided 34% of total output (sales) of Ukraine’s economy and 30% of total value-added* (in 2020). Their advantage was economy of scale. Due to losing this advantage, larger businesses will suffer significant decline relatively to previous year, which will be translated to decrease in GDP.
- Medium and smaller businesses may be more flexible in adapting to new circumstances. Their role will increase for the sustainability of the Ukrainian economy. (In 2020, medium and small businesses provided for 66% of total output (sales) and 70% of value-added).

Searching new channels of exports is important to minimize decline in exports and value-added generated by large exporting businesses.

Recommendations on the strategy of government interventions

OBJECTIVES AND PRINCIPLES

- To ensure that market economic mechanisms perform and to support the restoration of logistics, infrastructure and production assets.
- To facilitate business and economic agents' adaptation to new conditions.
- To avoid or minimize distorting stimuli of economic agents and their operations with government interventions.
- To support businesses in logistics and recovery of supply chains where market fails.
- To reduce uncertainty for businesses with consistent policies during war time and providing vision on economy's recovery path after the war.
- To protect vulnerable social groups.

KEY INTERVENTION MECHANISMS

- Inter-government negotiations on new export logistics routes.
- Negotiations on Ukraine's international support.
- Negotiations on reparations and sanctions imposed on Russia.
- Facilitating bank lending to the economy (for businesses and housing re-construction).
- Re-location of industrial and critical infrastructure enterprises to areas of lower warfare risks
- Private-government partnerships (for instance, in military industry).