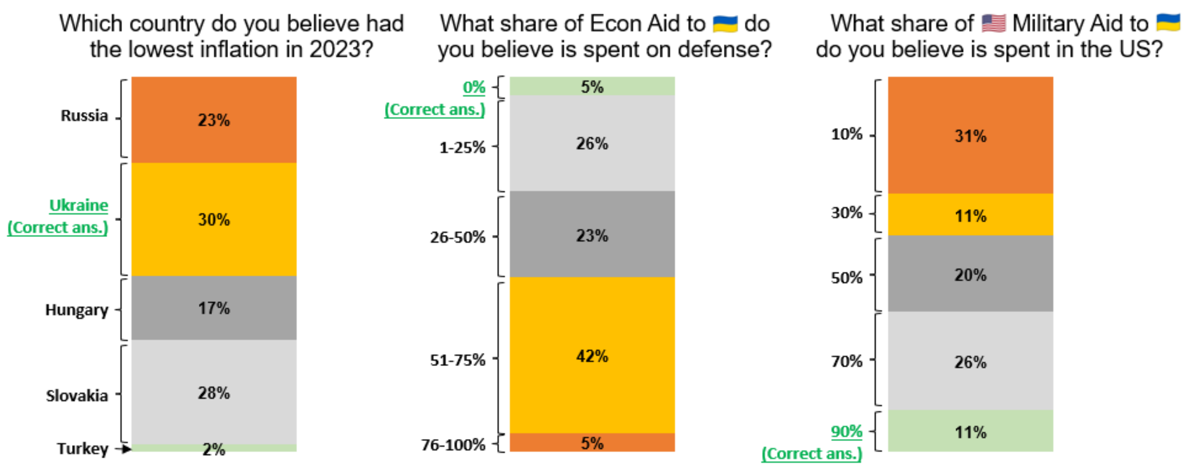
Yuriy Gorodnichenko

On Friday, February 2, Yuriy Gorodnichenko joined Markus' Academy for a conversation on The Ukrainian War Economy. Gorodnichenko is the inaugural Quantedge Presidential Chair in Economics at UC Berkeley.

A few highlights from the discussion:

- **A summary in five bullets**
    - A day of war costs Ukraine ~$1-1.5bn in damages. After more than 700 days, this amounts to ~$1tr in losses.
    - Ukraine has largely responded to the reallocation shock through markets. Many industries like agriculture and IT have proved resilient, while Ukraine has been creative at protecting its grain exports.
    - None of the economic aid is used for military spending. Up to now it has helped to stabilize the economy, especially through monetary policy. However the amounts and timing of aid are highly unpredictable, creating an unnecessary uncertainty.
    - Aid is not just an act of charity, it is an investment in security. We need to think about the costs of no-security. The invasion will lead to a test of NATO's article V.
    - The economy faces 5 key challenges: (1) Reduced productive capacity, (2) External imbalances, (3) Fiscal imbalances, (4) Financial stability, and (5) Extreme uncertainty.

- [0:00] **Markus' introduction and poll questions**
    - In a war economy we move from a decentralized economy to a blend. Why?
    - Coordination across the country becomes more important, as there is a single objective rather than a manifold of objectives for different people. Price signals to convey information about preferences are hence less important.
    - It is also rational to centralize power to prevent war-winners from extracting monopoly rents, and to secure the shift towards war production.
    - There is often some rationing, especially for basic goods (there is no price attached to avoiding conscription).
    - Inflation can rise because supply is depressed and directed to the war effort, and because of the extra government expenditures. The inflation tax is also easier to impose.



- [7:06] **The size of the shock**
  - As the war has evolved into one of attrition it has become a competition of economic force.
  - Ukraine has seen a decline in GDP of 30% and the unemployment rate soar to 35%, despite the fact that 9 million Ukrainians have left the country.
  - Steel used to be one of the largest industries (concentrated around the center and east) but at the start of the war it collapsed by roughly 80% and has barely recovered, with large negative multipliers throughout the economy.
  - As a rough estimate, a day of war costs Ukraine $1-1.5bn in damages. After more than 700 days, this amounts to ~$1tr in losses.

- [16:39] **Reduced productive capacity**
  - Potential output has also collapsed. Ukraine's labor force used to have 20 million people, but the war has led to 9mn refugees, 4mn displaced and 1mn mobilized. 35% of businesses report labor shortages.
  - There has been a major loss of physical capital. 9% of the housing stock has been destroyed, along with thousands of schools and tens of thousands of kilometers of road.
  - The war is a massive reallocation shock. The economy must redistribute resources across areas (towards the west) and across sectors (e.g. away from construction and towards trade).
  - Ukraine has carried out this reallocation through markets. Early in the crisis it regulated prices (e.g. fuel), but it became clear that this was ineffective and led to shortages: today you see surprisingly few shortages.
  - Many industries have been redirected towards defense (e.g. from textile exports to uniform production). However some industries are hard to shift resources towards: the production of tanks requires that it be concentrated, making it vulnerable to attacks.
  - We see a surprising degree of resilience (for example measured by new business registrations). Agriculture has been resilient because it is hard to attack. While the transport industry has declined, the ICT sector has sustained its exports (5% of GDP). Corruption perception indices have also improved significantly.

    - This resilience has been achieved through the decentralization of production to prevent attacks and by building missile-proof infrastructure with many layers of protection (and built-in redundancies).

- [30:30] **External imbalances**
    - Since 2014 Ukraine does not import any natural gas from Russia: in part due to the industrial decline it has become self-sufficient. However a lot of oil is still imported, and this contributes to the country's external imbalance.
    - The external balance has been hurt by the EU's import restrictions on Ukrainian goods. However overall Ukraine has been creative at protecting its grain exports. After Russia pulled out of the Black Sea Deal Ukraine set up a new corridor through the coast of the EU. The Danube ports have become as important as Odesa, while overall the country has reduced its reliance on sea transport in favor of rail and trucks through the EU border.

- [34:37] **Fiscal challenges**
    - Before the war Ukraine ran roughly balanced budgets, but since the invasion the deficit has grown to 30% of GDP. Revenues have grown significantly, but much less than spending. After accounting for economic aid there is a gap of $4bn a month. None of the economic aid goes to the military, it is spent on social services.
    - Before Crimea Ukraine spent $3bn in the military, while Russia spent $88bn. Today Ukraine spends $57bn and Russia $140bn. The $66bn in military aid from other countries has helped fill the gap. (Ukraine's GDP is $181bn).
    - Note that 90% of US military aid is spent in the US, and the money goes to the American defense industry.
    - After Crimea military aid to Ukraine remamined non-existent. This only prompted further Russian aggression, we have to think about the costs of not punishing aggression.
    - Looking at the time series of (received) economic aid, we see that it is a highly unstable flow of resources, which creates unnecessary uncertainty. While grants are the best source of funding, they have been declining over time. In January 2024 Ukraine received zero economic aid from the US.
    - When economic aid was not available in 2022 we saw fiscal dominance. The central bank became the largest source of government funding, printing more money than it received in aid from the US. This led to 25% inflation in 2022.
    - However with economic aid the central bank has been able to tighten monetary policy and fix the exchange rate to meet its inflation target of 5%.

- [44:15] **Financial stability**
    - Ukraine has a long history of banking and currency crises, facing severe stress during 2008 and Crimea. However after 2014 the central bank successfully worked to clean up the banking system and ensure its resilience.
    - There was a lot of stress after the full scale invasion but it dissipated relatively quickly. The system has ample liquidity, and there have been no bank runs.
    - Loans have been redirected from the private sector to the government.

- Default rates have grown and lending has been weak. The government has begun several programs to restart lending in the economy. All mortgage originations in the country are government subsidized.
- Ukraine's major banks are state-owned (more than 50% of the system's assets). There are plans to privatize these after the war, but their corporate governance has already improved.

- [50:32] **Extreme uncertainty**
  - Inflation and growth projections are extremely uncertain. It is hard to operate under these conditions, and planning horizons shorten.
  - Some of these uncertainties however can be completely avoided, especially around the amount and timing of aid. The EU's €50bn package was agreed on June-23, but the money will only begin to arrive on March-24.
  - As a reminder, the $300bn in Russian assets located in western countries would be sufficient to fund Ukraine for 3 years. It is not clear why European or American taxpayers should pay for this war, Russia should.
  - An overwhelming majority of Ukrainians are ready to continue the war to ensure the country's territorial integrity: They know there is no alternative. Russia has no credibility to sign a treaty, while Ukrainian citizens under Russian control cannot be left behind. As Trotsky said: "You may not be interested in war, but war is interested in you."
  - During WW2 Allied military spending reached 40-50% of GDP, while Axis spending reached 70%. In Ukraine it is around 30%: to meet the gap it can raise taxes and reduce the informal economy, but there are other possibilities like capital controls or restricting imports.
  - Economic aid is not just an act of charity, it is an investment in security. We need to think about the cost of no-security. Ukraine's nuclear electricity plans need to be under control. Commodity prices will also rise without security, and refugees both from Ukraine and from Africa (due to food prices) will increase.
  - We could also see a "Korean discount" applied to Europe, where economies become less attractive for investment because of the risk of war.
  - Consider that the US was spending 10% of GDP at the height of the Cold War. Not being secure will eventually require a similar amount of fiscal spending, distracting from other priorities like decarbonization.

- [1:02:35] **Ending on a positive note**
  - We should all prepare for a long war. Ukraine is doing an ok job at managing the economy, but this is harder to do without economic aid. Military and economic aid to Ukraine is the best investment in peace.
  - Budget deficits are the biggest challenge. It will be a big boost for the economy if we can protect economic activity through better air defenses, better access to ports, and solidarity lanes with the EU.
  - My baseline forecast is that Ukraine will win, but it really needs help from its friends.

Timestamps:
[0:00] Markus' introduction and poll questions
[7:06] The size of the shock
[16:39] Reduced productive capacity
[30:30] External imbalances
[34:37] Fiscal challenges
[44:15] Financial stability
[50:32] Extreme uncertainty
[1:02:35] Ending on a positive note

Videos snippets:

- 13:04 ("the economic") - 13:30 ("unemployment").
- 13:38 ("its hard to comprehend) -13.50 ("into two months")
- 15:39 ("people often think that") - 16:22 ("is affected everywhere")
- 19:29 ("this figure") - 20:45 ("on the labor side")
- 23:41 ("giant reallocation mismatch") - 24:30 ("we have to move resources")
- 24:40 ("you markus mentioned") - 25:12 ("serious shortages")
- 28:06 ("how do you achieve this?") - 28:15 ("may be affected").
    - Combine with the prior: 28:29 ("you try to missile proof") - 29:16 ("stable connections")
    - And consider ending at 28:43 ("starlink terminals")
- 29:34 ("this is for steel") - 30:41 ("downsizing in that sector")
- 31:48 ("just a few days ago") - 32:30 ("even in these very difficult conditions")
- 37:32 ("the current fiscal deficit") - 38:24 ("close this gap")
- 39:43 ("after the annexation") - 40:55 ("non punishment of russian aggression")
    - Consider ending at 41:36 ("boeing that gets money")
- 43:26 ("from this figure you should see") - 44:19 ("part of the story")
- 43:51 ("we know what happens") - 46:17 ("inflation target")
- 47:10 ("ukraine had a long") - 47:59 ("dissipated relatively quickly")
- 54:19 ("some of these unknowns") - 55:17 ("until the money is going to arrive")
- 55:18 ("just as a reminder") - 55:44 ("the russian government should pay")
- 56:11 ("there is an overwhelming") - 56:39 ("don't want to leave them behind")
    - Combine with the prior: 57:13 ("leon trotsky") - 57:25 ("you have to keep going")
- 58:47 ("during WW2") - 59:59 ("many possibilities")
- 1:05:30 ("everybody should be prepared") - 1:05:47 ("biggest source of uncertainty")
- 1:08:29 ("my baseline forecast") - 1:09:11 ("help from its friends")