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## After One Year of War, How Is Ukraine Managing?

Signs of economic resilience include a functioning banking system and a thriving IT sector.

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Beyond the headlines and the politics, many people outside of Ukraine have little idea of how the country is carrying on day-to-day while war rages.

Since the brutal, unprovoked, full-scale invasion by Russia on February 24, 2022, Ukraine's economy has shrunk by more than 30%. Before the invasion, annual economic output had topped \$200 billion.

There has been great damage to infrastructure (from agriculture to energy to steel) and an immense death toll. Businesses have been impacted and daily lives disrupted, leading to a refugee crisis in Europe and millions displaced even within Ukraine.

The Russian army's invasion destroyed schools, hospitals, ports, roads and bridges. The Kyiv School of Economics estimated the damage to infrastructure due to the conflict at \$138 billion as of December.

### Bright Spots

Still, Ukraine's economy has proven more resilient than originally predicted. The banking system has continued to operate even while under large ground and air attacks. Ukraine's Central Bank stopped the outflow of capital, instituted a fixed exchange rate and implemented other crisis measures. Amazingly, almost all banks continued operations.

Thanks to these measures, the economy remains functional. The government still receives income from taxes, and social-security payments are being made. There remains no small amount of international assistance, with a lot of fundraising leveraged to support the armed forces, provide humanitarian relief and to support different sectors, including education and healthcare.

Another good sign has been the information technology sector. According to the National Bank of Ukraine, IT industry export revenues actually increased by 23% year-over-year during the first six months of 2022, to \$3.74 billion.

In 2020, the Ukrainian IT sector accounted for 8.3% of total exports and was a major contributor to Ukraine's gross domestic product.

## **Supply Chain Impacts**

Both agricultural and the energy sectors have experienced major impacts.

Before the war, Ukraine's agricultural sector made up about 12% of its GDP and about 40% of its exports. Ukraine has been called the breadbasket of Europe if not the world, and the food grown there (wheat, barley, sunflower products, corn, etc.) in recent years has fed up to 400 million people annually.

Before the war, Ukraine exported about 5 million metric tons of grain a month, with about 90 percent from its ports on the Black Sea. Middle Eastern and North African countries have relied heavily on grain from Ukraine. The World Food Programme purchased 50 percent of its grain from Ukraine.

According to a Kyiv School of Economics Agrocenter report, direct losses in the first 8 months of the war to Ukrainian agribusiness were at about \$6.6 billion or 23% of the total value of its farming assets.

As for indirect losses on Ukraine's agricultural sector, the estimate is about \$40 billion for 2022.

Farmland makes up about 70% of Ukraine. The government estimates that about one-third of its fields are unfit now for planting.

The losses have been widespread and severe to agricultural infrastructure, with more than five million hectares of farmland damaged and in need of de-mining and recultivating. A great deal of farm machinery has been destroyed in the war; storage facilities have suffered damage and livestock farmers have lost huge amounts of animals because of bombings and other forms of destruction, disease and starvation.

Russians have looted and stolen agricultural products. Even if the war stopped today it would take about a decade for Ukraine to rebuild its agricultural sector. Financing continues to be a big issue, along with high logistical costs associated with getting products to market.

These great challenges continue even with the Black Sea Grain Initiative brokered in July 2022 with the United Nations and Turkey, enabling the reopening of maritime routes on the Black Sea. This agreement was extended for another 60 days on March 18, 2023.

## **Lessons Learned**

In the course of all of the turmoil, Ukrainians have managed to quickly repair energy infrastructure damaged or destroyed in Russian attacks, providing lessons for the future. Still, many families have suffered without heat and power in the winter and have had to deal with disruptions to internet services. Ukraine's power grid operator works as fast as possible to restore energy, while diesel generators are used to provide power to establishments, businesses and even apartments.

Ukraine's railways have performed well, transporting citizens as well as diplomats and world leaders such as U.S. President Joe Biden to Kyiv. The trains' on-time record has remained excellent.

Over 200 foreign diplomatic missions have arrived in Ukraine by train so far in wartime. At almost 15,000 miles, Ukraine's rail network is the sixth largest rail passenger transporter in the world, and seventh for freight. Since airlines are not operating in Ukraine now, its rail system is a literal lifeline for passengers, freight and mail. The rail network has already transported nearly 336,000 tons of humanitarian aid.

Many schools and universities continue to hold classes in person, while supplementing with online instruction.

## **Looking Ahead**

In addition to the tapping into support of other nations, Ukraine must continue the evolution of its governmental systems to the norms of the European Union.

Since logistics for products from agricultural to minerals and metals are economically essential, the country must continue the integration of its rail system with those in western Europe.

It must work on the de-mining of its lands and bring agriculture back to the shining jewel that it was.

Recovery and reconstruction are taking place even in wartime. Ukraine will need to deeply modernize. Infrastructure, technology, the business environment, institutions, education,

healthcare and other critical elements of the economy and society will have to be uplifted.

Expect there to be accelerated growth in private-public partnerships and excellent opportunities for development in different sectors as the country works to build better and stronger critical infrastructure and institutions.

Ukraine and Ukrainians have endured horrors in this war. Their strength, innovation and resilience is awe-inspiring. They have earned the support of the free world until victory and peace are achieved.

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