



Excecutive Summary

The resilience shown by Ukraine since Russia's full-scale invasion on 24 February 2022 did not emerge from a vacuum. It is due first and foremost to the great sacrifices of the Ukrainian people; but also to the fact that since Russia's annexation of Crimea in 2014, the country has deliberately and skilfully succeeded in strengthening both its military and its nation-building in precisely the opposite direction to that intended by the Kremlin. Kyiv has substantially reformed its military forces, bringing them together under a single command; upgraded its logistics and communications, under the control of mid-level commanders; and improved its cyber defences. These reforms have been implemented by Ukraine with the support of Western partners, such as NATO, and with Western practices as a model. The Ukrainian army has also shown a capacity to quickly absorb new and complex materiel. Ukraine has also managed to engage a network of reservists and involve civil society in a unique movement of volunteer forces that has become a national resistance movement. Civil activism, both formal and informal, sometimes even acting in place of the state, has become an integral part of Ukraine's response to Russia's war.

Introduction

The term resilience, which emanated from psychology, refers to both the process and the outcome of successfully adapting to difficult and challenging life experiences.¹ In foreign and security policy, the concept has become part of a comprehensive approach to building national security, the automatic switch and immediate cooperation between the state, the military and civil society as a single united body in times of trouble, and thus the ability to "bounce back" (as in Latin *resilio*).²

Ukraine's resilience is an explanation that is somewhat underestimated in the West for Ukraine's success in limiting and repelling Russia's military aggression following the full-scale invasion in February 2022. There has been far more focus on the shortcomings of Russia's own warfare – intelligence failures, poor leadership, corruption, and poorly motivated soldiers with substandard equipment – and on Western military aid to Ukraine. Ukraine's resilience is no accident but can largely be attributed to deliberate reforms and changes made over the past eight years.

Resilience Grew out of Humiliation

Ukraine's resilience grew out of the humiliating experience of 2014, when Ukrainian forces handed Crimea over to Russian soldiers. At the time, according to the then acting defence

¹ Hurley, Katie (2022) What is Resilience? Your Guide to Facing Life's Challenges, Adversities, and, Crises", *Everyday Health*, 14 July, https://www.everydayhealth.com/wellness/resilience/.

² Bulakh, Anna (2016) "Defining Ukraine's National Resilience in Light of Non-linear Threats: Where to Start?" Commentary, 22 December, https://icds.ee/en/defining-ukraines-national-resilience-in-light-of-non-linear-threats-where-to-start/.

minister, only 6,000 of Ukraine's 41,000 ground forces personnel had been combat ready, instead of the stated 20,000.3 In addition, 75 per cent of the naval servicemen in the Ukrainian Black Sea Navy defected to the Russian Black Sea Navy during the annexation.4 When Russia also attacked the Donbas in the east in April 2014, Ukraine's defence had to rely largely on the help of improvised volunteer battalions to contain the incursion.

There was also a political vacuum. The new, untried government in Kyiv had taken office on 26 February, just hours before Russian special forces took over the parliament building in Simferopol and two airports in Crimea. After president Viktor Yanukovych's escape, the Ukrainian Parliament appointed the speaker, Oleksandr Turchynov, acting president pending new elections planned for May. The new political leadership had little legitimacy in the country's south-east, particularly Crimea and the Donbas.

Over the next eight years, however, Ukraine managed to significantly strengthen its resilience despite the ongoing low-level war in the Donbas. Institutional capacity and legitimacy were enhanced by the 2014 and 2019 presidential elections, where both winners – Petro Poroshenko and Volodymyr Zelenskyi respectively – won in the first round with over 50 per cent of the vote. Local elections in October 2020 then renewed and strengthened the legitimacy of local assemblies and mayors. Several of the local and regional leaders who emerged as powerful leaders and representatives of Ukraine's resilience after the invasion – such as Ihor Kolokhayev, Mayor of Kherson, Vitaly Kim, Governor of Mykolaiv Oblast, and Ivan Fedorov, Mayor of Melitopol – assumed their positions in late 2020. Decentralisation reform gave the governing administrations in the regions a greater share of tax revenues, which allowed the quality and availability of municipal services provided to the population to be increased.⁵ This was an important factor in the mobilisation of volunteer initiatives to support the Ukrainian Armed Forces (UAF) at the start of the invasion.

In contrast to in Crimea and the Donbas eight years before, few leading local politicians crossed over to cooperate with the occupying power. In most cases, Russia had to recruit obscure pro-Russian politicians from the political periphery to fill the local military-civilian administrations that were established in occupied territory or bring personnel from Russia to fill the vacancies left by the officials who refused to collaborate.

Reforms to Strengthen Defence

In the years after 2014 a number of reforms were implemented to strengthen defence capabilities in Ukraine, and defence spending was increased from under approximately 1.5 percent of gross domestic product in 2014 to 3.2 percent in 2021.6 The volunteer battalions that had been vital in the early phase of the proclaimed anti-terrorist operation (ATO) in the

³ Euromaidan Press (2014) "Who destroyed the Ukrainian Army?", *Euromaidan Press*, 16 July, https://euromaidanpress.com/2014/07/16/who-destroyed-the-ukrainian-army/.

⁴ Ukrainian News (2017) "Defence Ministry: 75% Navy Servicemen Defect To Russia During Crimea Annexation 2014", *Ukrainian News*, 28 February, https://ukranews.com/en/amp/news/482217-defence-ministry-75-navy-servicemen-defect-to-russia-during-crimea-annexation-in-2014.

⁵ Kudelia, Serhiy (2022) "The Ukrainian State under Russian Aggression: Resilience and Resistance", *Current History*, October 2022, pp. 252-253.

⁶ Macrotrends (2023) "Ukraine's Military Spending/Defence Budget 1933-2023", Macrotrends, https://www.macrotrends.net/countries/UKR/ukraine/military-spending-defense-budget.

Donbas in 2014 were incorporated from the end of that year into the newly formed National Guard under the Ministry of the Interior. In 2016, Special Operations Forces were created as a separate branch of the UAF. The UAF grew from 130,000 active personnel at the time of the annexation of Crimea to 250,000, and at least one-third had experienced the fighting in the Donbas.

In 2018, the ATO under the Security Service of Ukraine (SBU) was replaced by a Joint Forces Operation (JFO) under the General Staff of the UAF. This change involved a recognition of the already established fact that the adversary was Russia's military rather than "domestic separatists". The government had announced an ATO in April 2014 instead of a military operation despite compelling evidence of Russian military involvement in the fighting in Slovyansk. This can be explained partly by the fact that that "separatism" was covered by national anti-terrorist legislation, and partly by the reluctance to declare a state of emergency shortly before the presidential elections scheduled for May.

The JFO shifted command from the SBU to the General Staff, established a new Commander-in-Chief of the Armed Forces appointed by the president and placed all branches of the UAF and law enforcement agencies under his command. This contributed to better coordination of the troops under a single command as well as better cooperation with the civil-military administrations, which had been set up by the local administrations in 2015 as part of the ATO.

In addition, the Law on the Foundations of National Resistance adopted in 2021 allowed the establishment of *Teroborona* (Territorial Defence Forces, TDF) as a stand-alone branch of the UAF with 10,000 personnel in peacetime but the capacity to mobilise 130,000. The law only came into force on 1 January 2022 and the first units were just being set up and trained as the Russian invasion began. In May 2022, parliament amended the law to expand both the size of the forces (from 25 to 32 brigades) and their powers.⁷

Cooperation with NATO and the Decentralisation of Decisionmaking

In 2021, adaptation of the UAF to NATO standards started to accelerate in logistics, communications and the use and training of troops. Ukraine made use of the specific NATO Trust Funds, set up at the Wales NATO Summit in 2014, that member and partner countries can access for specific projects. Among other things, Ukraine was able to establish a secure communications system, which was something it lacked in 2014.8

Ukraine also adopted a Military Security Strategy in 2021, replacing the 2015 Military Doctrine formulated during the fierce first phase of the conflict with Russia. Resilience became a key theme in cooperation with NATO, including in the first joint exercise which took place in

⁷ Shelest, Hanna (2022) "Defend. Resist. Repeat: Ukraine's lessons for European Defence", *Policy Brief*, European Council of Foreign Relations, November, https://ecfr.eu/publication/defend-resist-repeat-ukraines-lessons-for-european-defence/, pp. 2-5.

⁸ Shelest, Hanna (2022), p. 7.

⁹ President of Ukraine (2021) Указ Президннта України №121/2021 Про рішення Ради національної безпеки і оборони України від 25 березня 2021 року "Про Стратегію воєнної безпеки України" [Decree of the President of Ukraine No. 121/2021 On the decision of the National Security and Defence Council of Ukraine dated March 25, 2021 "On the Military Security Strategy of Ukraine"], https://www.president.gov.ua/documents/1212021-37661.

September 2021. In the same month, Ukraine adopted a policy document on introducing a National Resilience System, in line with NATO's baseline requirements for resilience. The commitment to increase resilience was adopted by NATO members at the Warsaw NATO Summit in 2016. Seven main areas for improved resilience were identified, being assured continuity of government and critical government services; resilient food and water resources; resilient energy supplies; resilient transport systems; resilient civil communications systems; and the ability to deal with mass casualties. Ukraine's system added two additional criteria to those of NATO: resistance to information influence, and financial and economic resilience. ¹⁰

Cooperation with NATO also aimed to reform the hierarchical military structure. In the past, there had been two main problems: a lack of good mid-level leaders in the officer corps and a top-heavy organisation. Initiative and responsibility had not been encouraged in the Soviet army, which meant troops waiting for direct orders from the top. This explained the weak performance of Ukrainian troops in Crimea. In February 2022, a concept was adopted on the development of a professional sergeant corps for the UAF, which set goals on improving professional training, skills, and social benefits, as well as interoperability with NATO.

This decentralisation of decision-making within the UAF constituted a crucial change in Ukraine's forces between 2014 and 2022. While Russia's Armed Forces are still highly centralized, hierarchical structures that lack a Western non-commissioned officer (NCO) corps with real powers, Ukraine has a higher percentage of junior officers who have served their entire career in an independent Ukraine.¹¹ This immediately gave Ukraine's troops a qualitative advantage over Russia's at the time of the full-scale invasion.

Civil Society and Popular Engagement in Defence

There is also a critical contrast between Ukrainian and Russian soldiers when it comes to morale and motivation. Ukrainian soldiers know that they are fighting to defend their country from an aggressor and feel the support of their compatriots. Russian soldiers, by contrast, have often been mobilized against their will, and sent to fight in another country often without even knowing why. There are indications that they had expected to be received as liberators but find themselves occupiers in a hostile environment. Back home in Russia, people seem to be striving to carry on with their lives as usual without being affected by the war.

The willingness to defend Ukraine increased in the build-up to the Russian invasion. According to an opinion poll from 1 March 2022, 59 per cent of the respondents said they were willing to take up arms in Ukraine's defence. This willingness to actively defend Ukraine also includes the occupied territories in southern Ukraine, where an underground resistance movement of partisans continues to resist Russian occupation. While not powerful enough to end the occupation itself, it makes the regions more difficult for Russia to govern and undermines Russia's narrative that the Russian occupiers have been welcomed by the local Ukrainian population.

¹⁰ Shelest, Hanna (2021) NATO's Resilience Concept and Ukraine, NATO and Ukrainian Prism, December, https://prismua.org/wp-content/uploads/2021/12/NATO_resilience_.pdf, pp. 3, 10-12.

¹¹ Shelest, Hanna (2022), pp.7-8.

¹² Rating (2022) Загальнонаціональне опитування: Україна в умовах війни [Nationwide poll: Ukraine at war], Sociological group Rating, 1 March, https://ratinggroup.ua/files/ratinggroup/reg_files/rg_ua_1200_032022_war_press.pdf.

While formal civic activism in Ukraine represented by nongovernmental organisations (NGOs) and professional civil society organisations (CSOs) has been active for a long time and received an impetus from the Euromaidan Revolution in 2014, Russia's 2022 invasion triggered a more prominent informal civic activism. All over the country, volunteers have played an important role in the resilience of Ukraine, from large-scale fundraising to individual initiatives on everything from the procurement of weapons, uniforms, food and equipment, to bulletproof vests for the soldiers at the front line. A special mention should be made of the creative entrepreneurship in combining civilian IT expertise with military means, such as when Ukrainian volunteers developed a simple mobile phone app to allow civilians to report sightings of incoming Russian drones and missiles, increasing the likelihood of them being shot down before they hit the ground. Although such volunteer initiatives and community resilience were in place in 2014, they received new impetus and were upgraded in 2022 to the level of becoming a de facto defence actor.

Cyber Defence

Another area in which Ukraine's resilience has increased significantly is cyber defence. In 2021, Kyiv adopted a new Cyber Security Strategy based on the principles of deterrence, cyber resilience, and interaction.¹⁶ Ukraine has had extensive experience of cyberattacks since 2014, as Russia has conducted a continuous cyberwar against Ukraine alongside its military aggression. Some of these attacks have targeted Ukraine's electricity supply. The "NotPetya" attack in 2017 affected or deleted data on devices in public institutions and businesses in Ukraine and abroad. Total losses caused by this virus were estimated at U\$ 10 billion.

The most effective Russian cyberattack on Ukraine was carefully planned and timed to strike on 23 February 2022, just hours before the large-scale invasion.¹⁷ The Russian cyberwarfare group in the military intelligence service (GRU), popularly known as "Sandworm", attacked Ukraine's senior military management and communications. The intention was to contribute to a general collapse of the Ukrainian military by knocking out the ability of the Ukrainian high command to lead its forces. Among other things, Ukraine's military satellite communications were knocked out when Russia blocked traffic to a Viasat satellite used by Ukraine's military.¹⁸

Zarembo, Kateryna (2022) "Civic Activism Against Geopolitics: The Case of Ukraine", *Carnegie Europe*, 30 November, https://carnegieeurope.eu/2022/11/30/civic-activism-against-geopolitics-case-of-ukraine-pub-88485.

¹⁴ Shelest, Hanna (2022), p. 13.

Sabbagh, Dan (2022) "Ukrainians use phone app to spot deadly Russian drone attacks", *The Guardian*, 29 October, https://www.theguardian.com/world/2022/oct/29/ukraine-phone-app-russia-drone-attacks-eppo.

¹⁶ President of Ukraine (2021) Указ Президента України №447/2021 Про рішення Ради національної безпеки і оборони України від 14 травня 2021 року "Про Стратегію кібербезпеки України" [Decree of the President of Ukraine No. 447/2021 On the decision of the National Security and Defence Council of Ukraine dated May 14, 2021 "On the Cybersecurity Strategy of Ukraine"], https://www.president.gov.ua/documents/4472021-40013.

¹⁷ Truesec (2023) "The treat Intelligence Report 2023", *Truesec*, https://www.truesec.com/hub/report/threat-intelligence-report-2023, p. 45.

¹⁸ Digital peace now (2022) Interview with Viktor Zhora, deputy head of Special Communication and Information Protection of Ukraine for Digital Development, Digital Transformation and Digitalization (CDTO), Digital peace now, 16 June, https://digitalpeacenow.org/stillvulnerable-viktor-zhora/.

The attack was in many ways successful, and Ukraine's defence largely comprised evading its effects. However, defence efforts were greatly facilitated by the fact that the Ukrainian military had adopted a Western management philosophy and Western mission tactics and were therefore less dependent than Russian units are on detailed orders from above to be able to act in the field.

Furthermore, in the initial stages of the invasion, when it looked like Russian forces were about to encircle and capture Kyiv, an international rescue operation was launched to save the Ukrainian state's databases. To prevent the Russian army from destroying or confiscating all the data on the Ukrainian people, all important data was exported out of the country at a feverish pace into "exile". While in peacetime it was important to maintain national sovereignty by collecting all classified information in computer halls within the country, where it could be protected from cyberespionage, in wartime when the country had been invaded and the protected data halls could be knocked out by a cruise missile, the solution was to quickly export data "into the cloud".¹⁹

Thus, one important lesson for Ukraine is that, just as on the battlefield, a country exposed to widespread cyberattacks by a larger and more resourceful adversary needs help from the outside world. Ukraine was receiving the help of US and British cyber units even before the war, which helped the search for malware that Russia had planted in advance on Ukrainian networks.²⁰ When the invasion began, several major IT and cybersecurity companies, both Ukrainian and based abroad, voluntarily began to cooperate with the Ukrainian cyber authorities. A collaboration was started early on with Ukrainian hackers, where the state's resources were insufficient.²¹

Perhaps the most important lesson that Ukraine has learned, however, is that it is not enough to have strong protection. With an adversary as difficult as the Russian GRU cyberwarfare unit, it must be assumed that sooner or later it will get past the protections and into the network. A resilient cyber defence therefore requires the ability to find and eject an attacker fast and then restore what has been damaged as quickly as possible. Ukraine has, for instance, personnel ready to manually restore switchgear rapidly if remote control is disrupted by a cyberattack. There are also well-trained incident teams that can isolate infected computers so that attacks cannot spread. Finally, Ukraine has learned to segment its networks to ensure that too many systems cannot be accessed from the same network. This limits the damage an attacker can do once it gets inside.²²

Russian cyberattacks on Ukraine have continued since the first day of the war. On 18 February 2023, the SBU reported that over 550 cyberattacks had been neutralised since the beginning of the year. The main targets of these hostile activities were logistics, energy supply and military infrastructure, as well as state databases. It was emphasised that the very fact that most of Ukraine's IT systems were operating normally proved that their network security

¹⁹ Author's E-mail interview with Mattias Wåhlén, Truesec, 2 December 2022.

²⁰ US Cyber Command (2022) "Before the Invasion: Hunt Forward operations in Ukraine", *Cyber National Mission Force Public Affairs*, 28 November, https://www.cybercom.mil/Media/News/Article/3229136/before-the-invasion-hunt-forward-operations-in-ukraine/.

²¹ Smilyanets, Dmitry (2022) "An interview with Ukrainian hacker 'Hermit1t' on countering pro-Kremlin attacks", *The Record*, 6 September, https://therecord.media/an-interview-with-ukrainian-hacker-herm1t-on-countering-pro-kremlin-attacks.

²² Author's E-mail interview with Mattias Wåhlén, Truesec, 2 December 2022.

specialists had been well prepared.²³ For a country at war, such as Ukraine, cybersecurity is an investment for the future, since cyberattacks will almost certainly continue even after military hostilities have ended.

Strengthening of Nation-building

Perhaps the biggest change in Ukraine's resilience since 2014, however, is not about defence capabilities per se, or cyber defence, but about strengthened nation-building in the country. Presidential elections before 2014 had always demonstrated a certain regional divide between the predominantly pro-West central and western regions of Ukraine, on the one hand, and the predominantly pro-Russian eastern and southern regions, on the other. This gap in electoral preferences had been gradually narrowing, at least since the presidential election in connection with the Orange Revolution in 2004, and by the Euromaidan Revolution in 2013–14 it had practically ceased to exist.

In 2014, the authorities banned Russian television channels in Ukraine, and blocked Russian social media and networks, while a new education law further restricted use of the Russian language in broadcast and print media. These changes were made in parallel with a campaign of decommunization, which banned not only communist but also Nazi symbols, and led to the demolition of communist monuments such as statues of Lenin, and the elimination of communist symbols from public buildings.²⁴

The full-scale invasion of 2022 was a turning point for the strengthening of the Ukrainian identity, a process which went hand in hand with the increasing use of the Ukrainian language at the expense of Russian throughout Ukraine. In 2022, 95 per cent of the population identified as Ukrainian, compared to 88 per cent in 2017. By 2022, 58 per cent of the population was using only or mostly Ukrainian as the language of daily communication, compared to 49 per cent in 2017. The number of people using only Russian (6%) or mostly Russian (9%) decreased to single digits in 2022, from 12 and 14 per cent respectively in 2017. Even in the east and south of the country, people speaking only Ukrainian now outnumber those who speak only Russian.²⁵ Thus, there was practically no difference in identity between the different regions of Ukraine, the only difference being between the regions under Kyiv's control and those still under Russian occupation.

Conclusions

Ukraine's resilience following Russia's full-scale invasion in 2022 provides compelling evidence of a rejection of the Kremlin's concept of the *Russkii mir* (Russian World). It shows how Ukrainian and Russian societies have developed in diametrically opposite directions in recent years. The Russian problem, on the one hand, can be largely traced to the dictatorial

²³ Wilk, Andrzej and ochowski, Piotr (2023) "Biden in Kyiv, Day 361 of the war", *Analyses*, 20 March, Centre for Eastern Studies, https://www.osw.waw.pl/en/publikacje/analyses/2023-02-20/biden-kyiv-day-361-war

²⁴ Kudelia, Serhiy (2022), p. 256.

²⁵ Kulik, Volodymyr (2023) Мова та ідентичність в Україні наприкінці 2022 року [Language and identity in Ukraine at the end of 2022], Zbruc, 7 January, https://zbruc.eu/node/114247.

political system and repressive society in Russia, with its lack of a free media, rampant corruption, lack of individuality and widespread fear. Ukrainian resilience, on the other hand, can be attributed to its political pluralism, decentralized decision making, individual initiative, active civil society, strengthened national unity and sense of knowing what you are fighting for. Bringing Russia and Ukraine together today in some sort of common post-Soviet model of explanation can only lead to inexorable and unequivocal error.



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