The Hague Centre
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Lessons for Taiwan
From the Russo-Ukrainian War

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1. Introduction

Russia's full-scale invasion of Ukraine in 2022 has fundamentally changed the landscape of European geopolitics. As the first large-scale armed conflict in Europe since the end of the Second World War, the Russo-Ukrainian War offers lessons worth noting. Given that Taiwan has faced threats from China for decades, these lessons are particularly valuable. As the conditions between Taiwan and Ukraine differ, any lessons learned must be contextually interpreted, and measures taken by the Taiwanese government should be adapted to fit the needs of Taiwan's national security. Currently, Taiwan is conducting reforms in aspects such as military, civil defence, and emerging technologies. Although many measures have already been put in place, they may not be sufficient for the threats that Taiwan faces. Furthermore, strengthening deterrence is also an important focus.

Currently, Taiwan is working closely with the United States for its military reform. However, Taiwan still faces several challenges. While the Taiwan Strait and Taiwan's island terrain could constitute a significant natural barrier, they largely limit the possibility of foreign aid during wartime. Taiwan also needs to face the challenge of peacetime grey-zone harassments, which requires more legacy platforms than asymmetric weaponry. Introducing emerging technologies (e.g., unmanned vehicles) also requires Taiwan to develop its own conception of using these technologies and integrating them into current systems. Considering the growing tensions in the Taiwan Strait, all these challenges should be overcome as soon as possible.

2. The lessons from Ukraine: introducing and re-examining

There are several important implications stemming from the Russian invasion of Ukraine for Taiwan. Though it is difficult to apply this context to Taiwan, some contextual differences between the two countries could offer the most important lessons. The most significant of these is Taiwan's island terrain. As Ukraine borders several NATO member states, allies could easily deliver donations to Ukraine via rail. However, in the Taiwan case, the "tyranny of distance" would limit foreign supplements to the island in the event of war. Taiwan's allies such as the United States and Japan would only be able to transport supplies via merchant ship convoys, which would also need to penetrate China's Anti-access/Area-Denial (A2/AD) capability. Therefore, Taiwan needs a more pragmatic way to increase its stockpiles of critical resources such as food, fuel, and ammunition, even in peacetime.

Among the differences between Taiwan and Ukraine which cannot be comparable, military ideology is a significant factor. For example, given that Ukraine used to be a member state of the Soviet Union, military units such as the National Guard of Ukraine (NGU) are based on a communist approach. The NGU was originally created from internal troops of the Ukrainian Soviet Socialist Republic.

All in all, besides the implications of geographical differences, there are several lessons applicable to both the Taiwanese government and society. These lessons cover various areas such as asymmetric warfare, total defence, the uses of emerging technologies, the effectiveness of Stand-off Weapons (SOWs) and survivability of critical assets, and the importance of effective deterrence.

2.1. **Asymmetric warfare**

During the first phase of the war, Ukraine's use of asymmetric warfare successfully stopped the advance of Russian mechanised columns and elite heliborne/airborne units. This demonstrated the effectiveness of asymmetric weaponry such as Stingers (man-portable air-defence systems) and Javelins (anti-tank weapons). In recent years, the concept of "small, many, smart" has been pushed by the United States, even before Russia launched the invasion. This encouraged Taiwan to purchase weaponry suited to asymmetric warfare and to introduce technologies such as unmanned aerial vehicles (UAVs or drones).

While Taiwan and the United States already have a firm focus on asymmetric warfare, there are several issues worth mentioning.

Firstly, asymmetric weaponry such as Stingers, Javelins, and NLAWs was successful in the first phase of the Russian invasion. However, Ukraine currently needs legacy platforms such as main battle tanks, artilleries, and fighter jets for launching counter-offensive attacks in the later phase of the war. Thus, Zelenskyy has been forced to ask for more Leopard 2/M1 Abrams main battle tanks, infantry fighting vehicles, armoured personal carriers, artilleries, and aircrafts, in particular F-16 fighter jets, rather than calling for more asymmetric weaponry.

Secondly, while asymmetric weaponry might be effective against a full-scale invasion from China, it is not appropriate against the daily Chinese grey-zone incursions of fighter jets and warships. In other words, these weapons are only suitable for specific scenarios. Thus, these weapons systems alone cannot be relied upon for Taiwan's defence. Asymmetric weaponry is also relatively defensive, with limited range. Consequently, it is prudent that Taiwan's military build-up should not focus exclusively on asymmetric warfare but should try to balance the development of asymmetric capability with that of large legacy platforms. The latter includes projects such as indigenous submarine and surface combatants (including next-generation corvettes, frigates, or even destroyers) as well as upgrading the US-built F-16 fighter jet fleet, newest F-16V Block 70 and M1A2T Abrams main battle tanks. Indeed, Taiwan has purchased thousands of Stingers, Javelins, and Tube-launched, Optically-tracked, Wire command link-guided anti-tank missiles (TOWs). The Taiwanese Navy is also receiving 400 ground-based harpoons and anti-ship missiles procured during the Donald Trump administration. With airborne and shipborne harpoons as well as Taiwanese-developed Hsiung Feng series anti-ship missiles, Taiwan has more than 1,000 anti-ship missiles ready to engage Chinese warships. In addition, all military services are enhancing their air-defence capability by procuring the indigenous-developed Tien-Kung series (the equivalent of American-made Patriot missiles), the Anti-Air variant of the Tien-Chien 2 Air-to-Air Missile (similar to the American-made AIM-120 AMRAAM), and the NASAMS air defence system from the United States.

Thirdly, it should be noted that since the war in Ukraine is ongoing, the interpretation of the Ukrainian battlefield might be affected by the "fog of war". All information from media and open sources online likely represent only "clips" of the battlefield, rather than a complete picture. Thus, the effectiveness of asymmetric weaponry and the use of small drones should be examined carefully. The Taiwanese armed forces has decided to procure more than 3,000 "military-use commercial UAVs." Given that the Ukraine Armed Forces (UAF) likely loses 9,000 to 10,0000 small UAVs per month, this procurement might be insufficient. The UAF has received tons of weaponry donations from countries all over the world, which might make Ukrainian soldiers more daring in their use of weapons such as man-portable missiles and small drones. In Taiwan, the attrition of asymmetric weaponry might not be as effective. However, firepower

is still the basis of winning an armed conflict, which means that Taiwan should still seek to increase its capability in this aspect.

2.2. **Total Defence**

Secondly, the "total defence" implemented by Ukraine has played a significant role in holding its position for more than two and a half years. Total defence measures include the creation of "Territorial Defence Forces" and the collective efforts of civil society. For example, civilians have been able to conduct intelligence, surveillance, and reconnaissance (ISR) missions via modern technologies such as commercial drones integrated with intelligence platforms. The efforts of Ukrainian civilians in logistics, patrol, and medical aspects also strengthened the resilience of Ukrainian society as a whole.

2.3. **Integration of emerging technologies**

Third, the UAF successfully introduced technologies such as UAVs and "new space" technology with the low-orbit communication satellite constellation named Starlink. The use of emerging technologies has not only greatly enhanced the combat capability of the UFA but also maintained critical infrastructure and the basic functions of society. For Taiwan, one of the biggest challenges is the restoration of the old civil defence system, which was abandoned after the end of the Cold War. The means of combining existing measures with emerging technologies is another challenge. Ukraine successfully combined these "all-out" approaches and new technologies. For example, the Ukrainian government has successfully integrated reporting systems with smartphone applications used by civilians. Ukrainians can use these applications to report the position of Russian invaders, often with images. Although these measures could have contributed to the mass killing of civilians by Russian troops, this is not a new phenomenon in Russian warfare. These measures have all strengthened Ukrainian resilience. Taiwan is currently focused on integrating similar technologies such as supporting civilians in reaching out to their nearest shelters.

The flexible and effective use of emerging technologies by the UAF is considered key. In particular, the use of small commercial drones and Starlink has been described as a "game changer". However, as mentioned, the fog of war might lead to biased reports. Thus, a re-examination of the effectiveness of small UAVs and "new space" low-orbit communication satellites is necessary.

Both small commercial UAVs and Starlink are a form of communication/entertainment technologies; however, these devices have the potential to be modified into attack platforms, such as thrown grenades or even suicide drones. Starlink could also become a key node of kill chains using UAF weaponry. These technologies seem set to become important backbones of Ukraine's communication and information warfare.

The videos and images taken by small drones have greatly aided Ukraine in its resistance against the Russian invasion. Information campaigns have also become an important part of gaining foreign support and strengthening domestic morale. Moreover, Starlink successfully maintains critical functions of Ukrainian society such as hospitals, the financial system, and electricity supply. Thus, the benefits of introducing emerging technologies go beyond the battlefield.

The Taiwanese Chunghwa Telecom company developed UAV systems for communication relays in 2019 as if foreseeing the lessons learned from Ukraine. Besides drones, Taiwan has also enhanced the use of new space technology. Both Taiwan's Ministry of Digital Affairs (MODA) and Space Agency (TASA) have launched projects to strengthen resilience via space. After Chinese vessels damaged two sea cables between the Matsu islands and Taiwan in February 2023, the MODA launched a project to introduce new space satellite communication systems including services from commercial space companies such as One Web and SES. Both companies now provide services to Taiwan, and their effectiveness was tested in the large-scale earthquake in East Taiwan in April 2024.

2.4. **Effectiveness of Stand-off Weapons (SOWs) and survivability of critical assets**

Another important issue is the effectiveness of SOWs such as ballistic and cruise missiles. One reason that the United States has asked Taiwan to focus on asymmetric warfare is that critical infrastructures and facilities might be easily destroyed by China's SOWs in the first phase of invasion. This means that not only could electricity or water supply be disabled by SOWs but also critical military nodes such as command and control, radar systems, and airbases. In this scenario, legacy platforms such as fighter jets and warships might not survive in battle or even have a chance to take off.

After more than 900 days of brutal combat, Russian forces have not been able to destroy critical infrastructures in Ukraine. Even though the Ukrainian Air Force has suffered heavy losses, Ukrainian fighter jets have continued fighting on the front line. This indicates that SOWs might not be as effective as expected. Furthermore, this highlights that the survivability and resilience of critical infrastructure, critical military nodes, and legacy platforms in Taiwan should be further strengthened. Currently, Taiwan is enhancing all these assets. Strategies include the following: strengthening mobility through introducing mobile radar systems in place of fixed radar stations, increasing resilience by adding alternatives and enhancing abilities of rapid repair, and strengthening the capability of multi-spectrum camouflage and countermeasures such as electronic warfare (EW). These measures are ongoing. Given that the Taiwanese Armed Forces still lack comprehensive EW capability and that the Chinese People's Liberation Army has greatly improved in this field, Taiwan should further cooperate with like-minded countries to develop and procure the necessary EW equipment.

2.5. **The importance of creating effective deterrence**

Lastly, while deterrence is known as a critical strategy, the Russian invasion indicates the failure of the deterrence concept. This failure suggests that further measures must be considered to deter autocrats effectively. Since 2014, the Minsk Protocol, which is the Western-Ukrainian cooperation regarding defence issues, and the modernisation of the UAF have neither satisfied nor deterred Russia. Thus, the construction and maintenance of effective deterrence should be a top priority for Taiwan and regional powers. Taiwan faces daily Chinese grey-zone harassment and the forms of China's grey-zone/hybrid tactics are difficult to predict. Traditional deterrence approaches are difficult to implement, and their effectiveness is limited in grey-zone and hybrid operations. To succeed at deterrence, Taiwan might need to combine approaches to create "a multi-domain deterrence". To achieve this, cooperation with like-minded countries, including European powers, will be necessary.

3. **Conclusion**

Although Taiwan has faced threats from China for more than seven decades, the potential risk of invasion has greatly increased since Xi Jinping took power in 2012. The war in Ukraine grants Taiwan a chance to review its defence and preparation. It thus has become a driving force for the Taiwanese government and society to launch reforms. Nevertheless, challenges remain. Moreover, some measures require international cooperation, such as effective deterrence.

In summary, Taiwan must engage more in strategic communication with like-minded countries and reassess its defence against China. Both are urgent and must be accelerated to prevent the progression of China's grey-zone threats to a full-scale invasion.

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