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Constitutional and European legal rules for armaments' quality and presentation of alternative procurement: Contribution to the possibilities of contractual optimisation in armament procurement (the contract as a force multiplier)**

ABSTRACT:

1. War is a legally relevant hazardous situation with potentially incalculable human casualties in terms of life and limb, especially of the soldiers in action. This dangerous situation is comparable to a nuclear power plant meltdown.
2. Many European states have a constitutional obligation (not examined in detail). For example, the Federal Republic of Germany and Austria must qualitatively optimise armament for the purpose of protecting the fundamental rights of soldiers who may be fighting.
3. This obligation exists throughout the EU based on the CFR and the jurisdiction of ECHR, in the rank of ordinary statutory law.
4. Armament procurement is also a legal subject for multidimensional optimisation under numerous legal aspects, in particular the choice of contract type, price optimisation, and tax optimisation. Therefore, it should (finally) be considered multidimensionally for the benefit of the defence of freedom in EU-Europe and NATO as a whole.
5. The procurement of defence equipment must contractually enable the core objectives of the state, namely secure availability, sustainable defence equipment, and cost-effective procurement. To this end, hundreds of individual contractual clauses and regulations must be used.
6. Rental and leasing contract procurement is generally more cost-effective and otherwise offers no disadvantages compared to traditional purchase procurement. All conceivable disadvantages can be contractually prevented and avoided. Specific unavoidable

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disadvantages are practically not recognisable. It is a suitable "force multiplier and defence enabler."

7. Optimised contractual arrangements, particularly other contract types and VAT optimisation, can save at least tens of billions of euros per year in the whole EU-Europe.
8. Due to the lower impact on the annual budget, more and/or better quality of armaments can be procured.

KEYWORDS: Armament – Constitutional obligation for optimized armament, Fundamental rights of soldiers, Optimized modes of procurement, VAT optimization modes.

1. Introduction: Military operations and legal requirements for armament decisions

This study deals with the eternal question of the relationship between military armament in the broader sense and the legal system. This relationship has only entered the realm of legal consideration since the increasing validity of fundamental rights. Earlier approaches went in other directions; for example, the book *Gericht über Habsburgs Wehrmacht*[1] does not actually deal with a legal assessment but a more overall political evaluation.

Methodically, the factual basis of the relevant branches of science, especially history of war and its relation to technological progress, must be carved out, and conclusions must be shown to create binding legal rules for armament policies and procurement decisions in democratic constitutional states.

In other words, the aim is to examine the extent to which legal obligations exist for armament decisions and thus to what extent these are removed from free political evaluation, by applying the broad constitutional review density applicable in the European Union (EU) and non-European North Atlantic Treaty Organization (NATO) states. To this end, the military factual basis to be taken as a foundation will first be established by going back through history; then, the legal standard of review will be determined and practical application criteria developed. Finally, the armaments sector is examined as a comprehensive area open to contractual optimisation using

[1] Regele, 1968.

the example of alternative arms procurement channels. In addition, value-added tax (VAT) optimisation is considered as a "mosaic stone example."

2. The factual basis: In search of superiority. *Tour d'horizon* to war—history and contemporary history or how to win a war and survive

2.1 Journey through the history of war and current operational events to establish the factual basis

We describe and analyse selected historical situations that focus on modern history, which is considered as the whole history of war; this is because thousands of years and ages could be analysed and situations could serve as examples. Therefore, we do not focus on the historical events but rather analyse the conflicts, battles, victories, and defeats from a single point of view: To what extent does better equipment in terms of position lead to victory in the broadest sense, and what effect does this have on the loss ratios? In short, how do you win a battle and survive? Is there an established relationship between victory and survival, and is there perhaps even a mathematical correlation?

This analysis takes us to selected locations in the history of war right up to the present day, and it naturally makes special reference to combat troops of the army and air force, and some examples from the field of naval armaments are also covered. Our aim is identifying factors of military superiority in specific operational situations and the consequences for the fighting soldiers. In doing so, we are primarily looking at duel situations—that is, battle tank against battle tank and aircraft against aircraft—but also the substitutional possibilities. This signifies that a certain weapon, a certain means of combat, can be eliminated by another suitable means of combat. Prime examples of this are the mass deployment of anti-tank armour using shaped-charge projectiles and today, of course, drones.

Let us begin our journey in the German western campaign of 1940: the German "Panzer II, III, and IV" or the (Czech) 38 t were neither qualitatively nor numerically superior to the Allied tanks. However, they were led with a better operational doctrine, particularly the concept of concentration and rapid deep penetration. Guderian's principle of "*nicht kleckern, sondern klotzen* = no frittering, but concentration" is just as important as "small" technical advantages, such as equipping each vehicle with radio. However, these advantages only unfolded their full effect through the inadequate actions of the French and British, who viewed the

tank as an infantry support weapon. Here, the better operational doctrine of the German side, in terms of both strategy and tactics, proved to be a decisive edge.

Let us now turn to Normandy after D-Day in 1944, when the British and Americans used the Sherman tank as the standard tank during the invasion. The experiences from the African and Italian campaigns from the end of 1942 are confirmed once again: 5–10 Sherman tanks were reckoned to be a match for one German "Panther" or "Tiger" in the deadly hedgerow landscape of Normandy. What is the reason for this technical superiority? In addition to the war experience and good training of the crew, particularly because of the mix of effective and protective technology, the long 7.5-cm L/70 cannon with a V0 of 1020 m/s had extreme penetrating power, as did the 8.8-cm cannon of the "Tiger" heavy battle tank. At the same time, both main battle tanks had good protection concepts thanks to strong armour.

The 1973 Yom Kippur War between Israel and some Arab states and the countless losses of tanks, some of which were still Second World War tanks, had a direct influence on Western tank armament: It led to a complete revision of the protection concept of the German "Leopard 2," for example, thus indirectly influencing the entire new generation of tanks in the west.

This tank generation made its grand debut in the Iraqi desert during the 1991 Gulf War: Iraq's numerically strong armoured forces, more than 4,200 battle tanks, consisted mainly of superficially modernised T 55s, T 64s, and T 72s from Soviet production. Until recently, this was the standard equipment of the former Eastern Bloc states, including Hungary. Several hundred T 72 tanks are still in service there today and are gradually being replaced by the Leopard 2.[2]

In Iraq, the outdated Soviet tanks were fitted with additional armour (for a relatively high price) and equipped with infrared night-vision devices with a range of up to approx. 1,000 m. Overall, this was as expensive as it was ineffective. A Latin principle applies here: *Non faciunt meliorem equum aurei freni*, meaning golden reins do not make a horse better. Tanks prove to be real coffins for their crews in all operational scenarios, not just classic tank battles. Whether the kill ratio in tank-to-tank combat is around 1:500 or 1:1000 (depending on the source) is ultimately an almost academic question. What is certain is that the Iraqi tanks had virtually no chance against the

[2] Wikipedia (2025) Ungarisches Heer, [Online]. Available at: https://de.wikipedia.org/w/index.php?title=Ungarisches_Heer&oldid=250281587 (Accessed: 06 March 2025).

well-managed, well-trained, provided with good logistics, technically state-of-the-art battle tanks of the main coalition states, namely the M1, Challenger II, and Leclerc. The Iraqi tanks were simply inefficient and the concept ineffective. Lesson: class instead of mass! From a commercial point of view, the Iraqi armoured fleet was simply pointless, as 500 or 1,000 battle tanks, even of an older generation, were far more expensive overall than a few modern battle tanks.

Let's leave the world of classic symmetrical battles and move on to asymmetrical warfare, with Iraq and Afghanistan after 2003 up to 2021 as examples.

A comparison of the susceptibility to loss and thus the frequency of casualties when using certain armoured vehicles, for example of the Canadian armed forces, is particularly suitable here. The Americans, followed by the Canadians, partially implemented the new doctrine of replacing the main battle tank with by a lightly armoured weapons platform for variable weapon systems. This concept is a "grandchild" of the German assault gun concept from the Second World War with its variants, such as the "Bison" self-propelled gun with a 15-cm infantry gun. This vehicle could be be confused with a mechanised infantry combat vehicle or armoured infantry fighting vehicle, but actually it is materially a different concept. This, the so-called "Stryker," carries variable armament up to a 105-mm cannon. German General Willmann's catchy and apt phrase, "*leicht rein, tot raus* = easy in, dead out," is misunderstood here. However, in asymmetrical combat operations, numerous vehicles are lost, and the crews are killed and seriously wounded. The Canadians soon made a spectacular decision: The Strykers, which were extremely vulnerable to anti-tank fire — such as RPG 7 rocket-propelled grenades in Afghanistan — were replaced by German Leopard 2A6Ms with additional mine protection.[3]

After four years, the Canadians were convinced of the effectiveness of the Leopard 2A6M as a "combat multiplier." In particular, both the better protection technology and the effect of the long 120-mm cannon with new, situation-appropriate ammunition (e.g. shrapnel up to 4 km) are emphasised. However, it must be mentioned that heavy armour technology is no guarantee of success: Turkey did indeed suffer several losses of Leopard 2A4s in the operation against the Islamic State, although these were probably also deployed in a tactically suboptimal manner, such as for terrain

[3] Cadieu and Adams, 2010, p. 32.

surveillance. A main battle tank is an ideal target in terrain suitable for ambushes.

The current game changer is, of course, drones of all kinds, and they already come in a variety of types and scenarios that are historically unparalleled in terms of speed: From unmanned aerial vehicles to unmanned ground systems, earth-bound drones, and unmanned marine systems, the family of military drones is growing at a more than rabbit-like rate.

2.2 Evaluation of our journey: Causes of superiority, victory, and survival

Let us be clear: Superiority can result from a wide variety of factors, from a correct assessment of the situation to optimised operational principles, tactics, and strategies as well as good training. However, *technical superiority* is always important. Some situations in war history are the best examples for this hypothesis.

In the 1991 Gulf War, the western coalition lost 31 tanks, most of them by "friendly fire," and the Iraqis lost 3,300 tanks. Thus, the ratio was 1:100.[4] The casualty ratio of human losses, that is, killed or wounded soldiers, was nearly 1:100 too. This ratio is valid under the assumption that the crew of a battle tank comprises four soldiers. So the calculation is that nearly 12,000 Iraqi soldiers were killed or heavily wounded.[5]

The Canadian Armed Forces' replacement of the Stryker in Afghanistan by the Leopard 2A6 brought an immediate result: There were no human losses any longer.[6] Thus, superiority means survival.

As will be shown later, this is also the reason why, considering the basic rights of the soldiers concerned, a quantitative view is ruled out as the cause of victories. This means that you win despite an inferior weapon because you are outnumbered 10 to 1, but this means that you accept

[4] Wikipedia (2025) Gulf-War, [Online]. Available at: https://en.wikipedia.org/wiki/Gulf_War and U.S (Accessed: 13 January 2025); U.S. Army Center of Military History (2021) Operation DESERT STORM in history army mil [Online]. Available at: https://www.history.army.mil/html/bookshelves/resmat/desert-storm/index.html (Accessed: 20 November 2024); Roos, D. (2023) How Tanks Played a Critical Role in the Persian Gulf War in history.com, [Online]. Available at: http://www.history.com/news/tanks-abrams-persian-gulf-war (Accessed: 03 January 2025); '1991: Sturm auf Kuwait' (2019) in Schweizer Soldat [Online]. Available at: https://www.schweizer-soldat.ch/2019/04/1991-sturm-auf-kuwait.html (Accessed: 16 April 2019).

[5] Thorne, 2015, p. 523.

[6] Cadieu and Adams, 2010, p. 32.

numerous losses, such as five or six weapons, and then win. In other words, victory is gained through high losses of men and material. Incidentally, this is the astonishing and inhumane concept of the Russian army in Ukraine. They are trying to take Ukrainian defensive positions by storm with ruthless, frequent quantitatively superior attacks, which sometimes succeed with extreme losses. Section 4.2.2 ends with a deeper discussion on why it is unacceptable to compensate for inferior armour with human sacrifices. The following principle applies: *non multa, sed multum*, or quality instead of quantity.

Protection technology and effective technology suitable for the situation are equally important here. It is always difficult to win in specific deployment scenarios with inferior, outdated equipment, unless it is replaced by other superiority factors.

2.3 Detailed findings on superiority, particularly technical superiority

Briefly summarised here are some historically proven superiority factors in terms of the "eternal" military experience, facts[7] of victory, and survival on the battlefield:

- Tactical and strategic surprise leads to victory.
- Superiority in key dimensions, especially better armament, leads to victory.
- Inferiority in key dimensions leads to defeat and death.
- Optimised active and protective armour is dynamic in time — it becomes obsolete.

Disrespecting these facts is *wrong*, not *justifiable*, and not the discretion of politicians. Such an approach is *falsified* based on the prevailing scientific theory of critical rationalism and the related method of statistical significance tests as equivalent methods of hypothesis testing.[8] This scientific theory is of course only prevalent in democratic free states.

As this is the most tangible aspect, the following section essentially focusses on technical superiority and technical assessment. These aspects are hard facts. In comparison, tactics, strategy, and training are soft factors that are less easily accessible for assessment.

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[7] '1991: Sturm auf Kuwait' (2019) in Schweizer Soldat [Online]. Available at: https://www.schweizer-soldat.ch/2019/04/1991-sturm-auf-kuwait.html (Accessed: 16 April 2019); Thorne, 2015, p. 523.

[8] Bortz et al., 2002, p. 22, 26.

2.4 Differences in the causes of technical superiority: Linear and disruptive developments

For technical developments, especially in the case of development of armament, there are two basic lines of development.

The first is "organic," evolutionary development: A basic weapons system is constantly being improved. Many small improvements simply make older models obsolete and less effective. For example, the Leopard 2 main battle tank of the German Bundeswehr and many other nations has been improved continuously since 1979, and the first examples would have died out "evolutionarily" today.[9]

Especially in the case of evolutionary developments, the sometimes-astonishing longevity of armour material must also be considered. In this respect, the so-called platform concept applies. A good armour platform — for example, the original model of the Leopard 2 main battle tank — must be constantly developed further with regard to obsolescence, that is, ongoing obsolescence. This results in a service life of around 50 years for evolutionary platforms; for example, see the "Marder" infantry fighting vehicle or fighter aircraft such as the American "F-16" or even the "B52" heavy strategic bomber of the US Air Force. The latter has now reached a proud 72 years, of course with hundreds of updates and further developments.

On the other hand, there is disruptive development: Some examples are the global positioning system used in the 1991 Second Gulf War and the development and implementation of the Dreadnought battleships in the years after 1904[10] in the royal navy, which obsolesced all formerly build battleships. The Shaped Charge Bazooka had an impact wherein all steel-armoured tanks became very vulnerable. The latest example is the nearly total overuse of military drones (unmanned aerial vehicles, unmanned ground systems, and unmanned marine systems) in the Russia-Ukraine war.

These developments *end* another line of development and no longer allow the organic evolutionary development of the predecessor systems. Of course, there are also revolutionary developments within continued evolutionary lines of development that make certain features irreversibly obsolete. These developments have the character of technology-driven "revolution in military affairs" with fundamental effects on tactics and even

[9] Von Creveld, 1991, p. 311.
[10] Potter and Nimitz, 1974, p. 295.

strategy. A prime example of this is the pure "steel tank," which has no longer been the basis for tank technology since the compound armour became established. In other words, those who deny this disruptive, revolutionary development and do not immediately convert their armour will lose.[11] The principle of *numquam retrorsum*, or never go back, applies.

3. Superiority, threat, and public law, especially constitutional law

3.1 Threat prevention and public law

We have found that the use of a technically superior weapon system, whether in duel situations or other missions appropriate to the situation, generally increases the probability of success. This is true if training, tactics, mission doctrine, etc., are also adequately good. Victory in a duel situation (tank against tank) or in other operational scenarios is therefore considerably more likely. In other words, inferior equipment exponentially reduces the chance of leaving a battle alive (and ideally as a winner).

In terms of specific consequences for armament and equipment decisions for troops in the field, modern equipment, particularly the "best" protection and effective technology based on state of the art in science and technology, is clearly the main measure that minimises risk based on scientific findings and concrete operational experience.

This statement is an established empirical finding in a wide range of relevant empirical disciplines. These include the history of war; operations research; and stochastics with, for example, so-called Monte Carlo simulations. Complex military simulation and training programmes are based on stochastic and operations research methods and models. One thing is always certain: The better a weapons system and the better the soldiers operating it and the environment, the better their chances in battle and the higher the chances of winning in combat. However, this also simply means surviving. [12]

Let see some examples for explanation. It remains to be seen to what extent the deterioration in chances can be expressed in powers of ten (1:10, 1:100) based on the experience of recent decades with regard to the effect of

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[11] Wikipedia (2025) Jom-Kippur-Krieg, [Online]. Available at: https://de.wikipedia.org/w/index.php?title=Jom-Kippur-Krieg&oldid=251395776 (Accessed: 16 January 2025).

[12] Dupuy, 1980; Macksey, 1986. For scientific utilisation, see also Jarausch, Arminger, and Thaller, 1985.

an (evolutionary) generational leap or a disruptive development in combat-critical large-scale equipment (e.g. the leap from the "T 62/T64/Leopard 1" generation to the "M1/Leopard 2"). What is certain, however, is, that there is at least a high probability of this happening and that there will be a significant change in the probability of success and survival. However, one thing is beyond doubt: the superiority of a tactic or even a weapon system, especially with regard to the protective and effective components, must always be assessed in relation to time. While the "Panther" main battle tank was a superior weapon system in the Second World War, it was hopelessly outdated just a few years later. In this context, effective and protective technology should be mentioned as complementary technologies that can only be substituted by other factors to a limited extent: the Stryker certainly had good effective technology, but the protection was too weak.

Of course, it should not be denied here that a duel situation is not the standard case in the battle of combined forces and cannot be used without restriction.

Complete weapon systems can be completely or partially replaced by other weapon systems, for example, anti-tank defence can also be provided by precision artillery and other weapon systems instead of tanks, at least in part. The only decisive factor is that the effective and protective technologies are optimized for the situation. In other words: if I have to fight without an adequate weapon system, an adequate substitution decision must be made.

What does all this mean for the crews of the combat vehicles, for the soldiers? The example of the Iraqi tanks or infantry fighting vehicles that were destroyed makes this drastically clear: the firing ratio of 500:1, for example, also means that an Iraqi tank or armoured infantry soldier had a 1:500 chance of survival compared to an American tank soldier in an M1 Abrams tank, i.e. a fight usque ad finem - to the bitter end.

What does the special nature of asymmetric warfare mean for the question of superiority? Is everything different there? The answer is a clear no. It is true that there are numerous special features, such as guerrilla warfare, suicide attacks, etc. In particular, this also includes the lack of compliance with the rules of international law of war, a prime example being the Geneva Convention and supplementary agreements. However, the decisive factor for the question of superiority is also here: if a suicide becomes "pointless", i.e. does not lead to the intended effects, it is better not to commit it. The effect is of course also the psychological effect on a "zero-

loss" society like ours. In view of the effect, even a single victim can be seen as the success of a suicide attack. As always, the question of establishing the appropriate superiority for the situation arises here, only with slightly different answers.

Just to summarize an essential conclusion: being superior in combat, especially with regard to the weapon system, results in an exponentially higher probability of survival. In negative terms: an exponentially lower probability of death or serious injury. In other words, the risk of being killed or wounded in action is greater, usually exponentially so, if the most appropriate equipment is not used (this does not always have to be the latest, see the partial misdevelopment of the "new" Stryker!) in terms of protection and weapon effectiveness combined with the best training for soldiers, operational logistics and tactics. To deny this would be, due to the basis of scientific findings just as wrong as to deny that cancer, for example, is a life-threatening disease. It would be just as wrong to deny the threats of the peaceful use of nuclear energy.

3.2 Legal relevance of the "superiority and threat" relationship

Superiority, especially technical superiority, means minimising the threat for humans. The relevant legal aspects of these identified threats and reduced opportunities now arise from the fundamental rights of people: Threats to material are practically legally irrelevant in this respect. The subjects of fundamental rights are people—in this case, soldiers. This leads to the legal instrument of threat prevention, based on both police law and other security-related legal areas.

Military operations above a certain intensity are dangerous and are subject to risk assessment. What definition of threat do we use for this? The definition used here under police law is as follows: A threat in the sense of police law exists if there is sufficient probability of damage to an asset protected by the police if things proceed unhindered.[13] The intensity of the damage can vary just as much as the probability of the damage occurring. Incidentally, this definition is also used in foreign security and policy as well as business risk management.[14]

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[13] BVerfG, 2020. The Federal Constitutional Court (Bundesverfassungsgericht) has specified the requirements for danger in the context of police measures and emphasised the balancing of fundamental rights (1 BvR2795/19); Dietlein, 2022.

[14] Gleißner and Romeike, 2005, p. 27.

In terms of threats to European and NATO soldiers, the risk of being seriously wounded in a lightly armoured vehicle or on infantry patrol, for example, must be assessed on a completely different probability basis depending on the intensity of the mission. Taking an example, if the risk in a mission in Kosovo or Bosnia-Herzegovina is relatively low in the context of the Kosovo Force and not significantly greater than that when serving in Germany, then the risk in Afghanistan is considered significantly higher. Moreover, the risk has increased immensely in Ukraine since 2022 or in the war between Armenia and Azerbaijan — the first real drone war. In other words, the risk of being killed or seriously wounded there is high. This is particularly evident in the most recent war — the Gaza war against Hamas from 7 October 2023. If we now apply the insight that better equipment, and particularly the availability of equipment appropriate to the situation on the ground, reduces risk, the best example is of the Canadian troops in Afghanistan: While the weapon carrier concept resulted in numerous dead and wounded (in addition to the destroyed weapon carriers themselves), this rate fell exponentially when the Leopard 2A6 with superior effective and protection technology was adopted — in addition to increasing the probability of success in the specific deployment scenarios.[15] There were no more casualties, and the number of wounded fell rapidly.

Not only the Canadians have experienced this, but so have the British, American, and Dutch allies.

4. Armament quality and European legal and national constitutional law through the example of Germany

What does this mean in terms of constitutional law?

4.1 Legal regulations examined: National constitutional law, using Germany as an example, and European regulations

This section examines national constitutional law, taking Germany as an example, as well as EU law and European treaty law such as the European Convention on Human Rights (ECHR). This because the latter applies in all EU Member states, in some cases as constitutional law, such as in Austria.[16]

[15] Cadieu and Adams, 2010, p. 32.
[16] Gimmler, 2017b, p. 628, 633.

The following analysis is based on the German Basic Law—the German constitution. However, the principles are applicable in all European states due to the ECHR, which applies throughout the EU.

German constitutional law is chosen for various reasons: First, the author of this study is German and has studied German law, which is why it is most familiar. Moreover, the German Federal Constitutional Court is probably the most active and the constitutional court with the most decisions in the EU, with more than 166 volumes of decisions.

4.2 Examination of the legal situation and the relevant jurisdiction in Germany

4.2.1 General constitutional regulations

The Basic Law contains provisions on defence and external security in various articles, such as Article 12a on compulsory military service, Articles 87 a and b on the establishment of armed forces and the separation of military administration and troops, Articles 24 (2) and 26 on alliances and the prohibition of aggressive war, and particularly Article 115 ff on the case of defence.

However, none of these constitutional norms make any *direct* statements on the material quality of armaments or deployment-related decisions. Nevertheless, the Federal Constitutional Court has repeatedly pointed out that the Basic Law has made a basic decision for effective national defence in this respect.[17] However, these articles do not help us in our concrete assessment. Yet, the decision of the Federal Constitutional Court on Article 24 of the Basic Law contains a very important statement: The fact that Bundeswehr is mentioned in the German Constitution means, that it must also be operational.[18].

4.2.2 Relevant Article 2 (2) of the Basic Law: The Federal Constitutional Court's case law on threat prevention

First, we must assert, that — as in probably most countries of the world — there are no special regulations for threat prevention, which must always be

[17] BVerfG, Dienstpflichtverweigerung (1 BvR 83, 244, 345/69).
[18] BVerfG, 1978. Wehrpflichtnovelle (2 BvF 1, 2, 4, 5/77); von Mangoldt, Klein, and Starck, 2010, p. 1.

checked methodologically. As with many other constitutionally relevant issues, no ruling has yet been issued on the specific question at hand regarding the quality of the military equipment and other decisions. However, in its ground-breaking decision on the NATO Double-Track Decision and its implementation in Germany, the Federal Constitutional Court clearly stated the following:

> Assessments and evaluations of a foreign and defence policy nature are the responsibility of the Federal Government. The Basic Law only limits the power of assessment to which the Federal Government is entitled in this respect to obvious arbitrariness. Within these extreme limits, the Federal Constitutional Court does not have to review whether the assessments or evaluations of the Federal Government are correct or incorrect, as there is a lack of legal standards in this respect. They are to be decided politically.[19]

This is a throwback to the famous political question regarding the theory of the US Supreme Court from 1803—over 200 years ago. Therein, the US Supreme Court ruled in the case of *Marbury v. Madison*[20] that political questions cannot be decided by law.

These statements fully endorse and provide decisive support for the view expressed here.

The aforementioned decision, as well as the decision on the admissibility of the storage of chemical weapons in Germany[21] and other similar decisions, were always based on the following argumentation: The applicants requested the Federal Constitutional Court to determine the 'unconstitutionality of a certain decision to act'. In this case, the Federal Constitutional Court was presented with a specific theory or a conclusive train of thought regarding a threat.[22] For example, in the case of the NATO rearmament decision,[23] this was the idea of 'a significant increase in the threat posed by provoked Soviet countermeasures'.

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[19] BVerfG, 1985. NATO-retrofitting decision. (2 BvE 13/83).
[20] US Supreme Court Center, 1803, Marbury/Madison (5 US 137 (1803)). Justia US Supreme Court.
[21] BVerfG, 1987. Lagerung chemischer Waffen (2 BvR 624, 1080, 2029/83).
[22] BVerfG, 2010. "Cern" decision (2 BvR 2502/08).
[23] BVerfG, 1985. NATO-retrofitting decision. (2 BvE 13/83).

The application of this line of thought would have resulted in unconstitutionality of the contested measure in each case.

Here, the Federal Constitutional Court has always wisely exercised restraint and, in line with the scientific theory of "critical rationalism"[24] that prevails in western democratic constitutional states, has stated the following: A Constitutional Court does not have to determine which theory is more correct when there are several possibilities.[25] We must not substitute our own court-opinion for that of the politically responsible decision makers. *We do not have to verify, but we have to falsify as far as we can.* Only if something can be declared as false can it be investigated. Only then does the Federal Constitutional Court have to declare the measure as null and void. This is because there is a so-called high level of scrutiny in this respect; otherwise, only an "arbitrary review" takes place, which is a review to determine whether a decision was made by disregarding objective reasons.

As is so often the case, very tangible, concrete constitutional requirements for armament and deployment decisions arise from the state's duty to protect fundamental rights—and this is one of the merits of the early environmental movement with its fight against nuclear power plants. The decisive factor here is Article 2 (2) sentence 1 of the German Basic Law: 'Everyone has the right to life and physical integrity'.

For decades, the German Federal Constitutional Court has developed the following principles and relevant lines of decision from this simple sentence in constantly expanding case law: The state is obliged to protect human life in all its sovereign manifestations—the so-called objective duty of the state to protect.[26] Using the example of nuclear energy, this means that extreme efforts must be made, such as through extremely strict safety requirements, to prevent nuclear accidents, even if they have a probability of less than 1:1 billion. The state is therefore obliged to apply extreme safety standards when approving and monitoring nuclear power plants.

Even in the case of life-threatening illnesses (e.g. cancer), public health insurance funds are obliged under certain conditions under Article 2 para. 1 sentence 1 of the German Basic Law to cover non-standard therapies and possibly spend six- to seven-figure sums.[27]

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[24] Popper, 1994, p. 16.
[25] BVerfG, 1985. NATO-retrofitting decision. (2 BvE 13/83).
[26] BVerfG, 1998. Cassini-Weltraummission-Entscheidung. (1 BvR 1908/97).
[27] BVerfG, 2009. (1 BvR 316/09).

The intensity of the protective measures to be taken against hazards is mainly determined by the extent of the conceivable occurrence of damage. The more intensive the hazard, the greater the requirement for protective measures. Using the example of nuclear energy, a major accident would pose a fatal threat to an extremely large number of people, however unlikely it may be. Intensive protection must therefore be provided against it. Conversely, if no significant intensity of damage can be determined, no special protective measures are required.

Regarding security-related case law, the so-called Schleyer decision of 1977 was ground-breaking in this respect.[28] According to this decision, the state has a duty, even in terrorist kidnapping cases, to do everything possible to avert the threat to life and limb caused by unlawful acts by third parties. However, even in these cases — particularly in cases of blackmail and demands for the release of prisoners — the state has discretionary powers. Only rarely are individual specific measures the only possible measures. However, the so-called final kill shot may be the only permissible and necessary option in hostage-taking cases.

What is important here is that it is usually taken for granted that there is a considerable threat based on life experience or scientific knowledge: Cancer is a life-threatening disease from a medical point of view, and a serious terrorist abduction poses a threat to the life of the abductee. It has been scientifically and historically proven that nuclear energy poses considerable threats. It has a high hazard potential, even if there is no high probability of damage occurring (with optimum safety measures). This is based on clear empirical and/or scientific findings. Any other assessment would be inadmissible and therefore incorrect and legally void.

It is important to mention the most recent so-called climate decision of the Federal Constitutional Court of 24 March 2021.[29] Herein, the Federal Constitutional Court expressly established and affirmed the state's obligation to protect life from the threat of physical harm caused by negative climate developments ("climate catastrophe") and assumed extensive duties of protection on the part of the state. The state's duty to protect as an objective legal duty also includes the duty to protect against the threat of climate change. This objective duty to protect on the part of the state corresponds to a subjective right to protection on the part of the citizen. In particular, fundamental rights also provide subjective legal protection as

[28] BVerfG, 1977. Schleyer decision. (1 BvQ 5/77).
[29] BVerfG, 2021. Urteil (1 BvR 2656/18).

an intertemporal safeguard of freedom against risks being shifted into the future. It is not widely known that there is already a long-standing precedent ECHR case law in this regard,[30] which recognises preventive protection against life-threatening environmental disasters.

The latter decision can be applied one-to-one to the risk of armed conflict and, since 2022, also to the risk of a war of aggression against EU/NATO Europe: Against a life-threatening situation such as a major attack on EU Europe, the climate catastrophe is likely to be regarded as triviality in the foreseeable future.

However, for the questions raised here, this means that there are clear empirical or experiential standards, namely reliable findings and life experience. This is comparable to the above-mentioned examples, such as case law on nuclear power plants and cancer treatment. The knowledge is just there—*Superiority means minimising threat*, and the path is rocky but rewarding: *per aspera ad astra*.

All of these aspects were also impressively applied and confirmed in another decision of the German Federal Constitutional Court on security, this time in the field of nuclear physics research in the so-called "CERN" decision of 18 February 2010.[31] In this case, a German applicant, referring to a scientific theory of a few nuclear physicists who regarded the CERN nuclear physics laboratory in Switzerland as a potential "doomsday machine," had turned to the Federal Constitutional Court with an application to take the necessary measures for Germany to prohibit the commissioning of CERN. Most experts disagreed and saw no particular potential threat. The Federal Constitutional Court simply refused to play the role of "arbiter of physics" here and made it clear that reliable findings are required to arrive at an assessment of the risk and not to determine the risk situation merely by asserting the threat of major damage.

The following applies to the military sector based on obvious multi-disciplinary findings: The serious threat situation as such is evident, obvious, and undeniable. In view of these considerable threats, the political and military scope for assessment is now narrowing towards an intensification of the legal duty to protect.

Only decisions that correspond to empirical and scientific findings are permissible within a certain range. A practical example is as follows: Suppose that a decision was made under the rule of German constitutional

[30] ECHR, 2004.
[31] BVerfG, 2010. "Cern" decision (2 BvR 2502/08).

law; then, the Canadian government's decision to replace the lightly armoured weapon carrier with the heavily armoured Leopard 2A6M, which "guarantees" survival of the crew, was a correct political/military decision. Whether this decision was the only possible one is an open question. Given the intensity of combat and the specific combat situations in southern Afghanistan, sticking to the "superficially" cheaper ("money before lives") weapons carrier concept would have been simply wrong and therefore illegal. Another typical example was the temporary failure to modernise the night-vision equipment for the German "Marder" armoured personal carrier and mine protection for the "Dachs" armoured engineer vehicle due to a lack of funds. This was simply unconstitutional according to the principles developed.[32]

This also explains why the concept of inferior (in terms of the individual weapon) mass armament (mass instead of class) is inadmissible, as the lack of quality is compensated for by the human sacrifice of soldiers. A prime example in this respect is the armament of the Allies in the Second World War (Sherman versus Tiger) or the First Iraq War, albeit unsuccessfully. Under the rule of fundamental rights, money and thus a lack of armament quality cannot be replaced by human sacrifice.

Thus, the German Federal Constitutional Court summarised the following in one decision about using nuclear power plants: The more intense the possible encroachment on the right of life, especially because of the existing risk of death, the greater the duty to protect.[33]

4.3 European regulations: Article 2 ECHR and Articles 2 and 3 EU Charter of Fundamental Rights

Due to the almost identical wording of Article 2 of the German Basic Law and Article 2 of the ECHR alone, the legal situation under European Law can be assumed to be the same as in the German Constitution. Furthermore, the Charter of Fundamental Rights of the EU (CFR) under the primary European law applies; according to Articles 2 (1) and Article 3 of the CFR, 'Everyone ... the right to life', and according to Article 3, para. 1 of the CFR, 'Everyone has the right to physical and mental integrity'. Moreover, the wording of Article 2, para. 1, sentence 1 ECHR is 'Everyone's right to life shall be protected by law'.

[32] Steinmann, 2012, p. 9

[33] BVerfG, 2008. Atomausstieg (1 BvR 2821/11, 321, 1456/12).

In Austria, the ECHR is a constitutional law, that is it has constitutional status.[34] In Hungary, Articles 1, 2, and 5 of the Constitution of 8 April 2011 have constitutional rank and similar regulations. The ECHR is considered an ordinary statutory law in Hungary. These principles should therefore also apply to Hungary.[35]

The non-European NATO countries of the United States and Canada are constitutional democracies with a wide range of constitutional human rights; therefore, these principles are valid and more or less similar. This is also indicated by the United Kingdom (UK) Supreme Court's decision of 2013,[36] as the UK belongs to the same Anglo-American legal sphere. The European Court of Human Rights has substantiated the right to life in numerous decisions.[37] For example, it has expressly established the protection of the entire population as well as of individuals or groups of individuals. This applies if there is a threat of injury from a third party, the prime example being acts of war by aggressors.[38] In particular, organisational fault can also be considered if forward-looking, future-oriented, and adequate planning, organisation, and equipment are neglected.[39] For EU-Europe, the Treaty of Lisbon is the third independent treaty under primary law and therefore has constitutional status. The CFR binds the EU and states insofar as they apply EU law.[40]

4.4 Application to the special status of the soldiers in NATO/EU armies

Soldiers are obliged to accept risks to life and limb as part of their military service, particularly as a result of their duty of valour under Section 7 of the German Soldiers' Act. However, the soldier is not deprived of his fundamental rights under Article 2 para. 2 sentence 1 of German Basic Law.[41] Like any other citizen, he is entitled to protection from interference by third parties. The ECHR has also expressly considered so-called special legal relationships such as military service to be subject to special protective

[34] Gimmler, 2017b, p. 628, 634.
[35] Gimmler, 2017a, p. 172.
[36] UK Supreme Court, 2013, Smith and others v. MOD (41/2013) p. 1.
[37] Karpenstein and Mayer, 2015, p. 36.
[38] *Case of Mccann and Others v. The United Kingdom* App. No. 18984/91, 27 September 1995; *Case of Van Colle v. The United Kingdom* App. No. 7678/09, 29 April 2013.
[39] *Case of Mccann and Others v. The United Kingdom* App. No. 18984/91, 27 September 1995; *Case of Keenan v. the United Kingdom* App. No. 27229/95 2001, 3 April 2001.
[40] Geiger, Khan, and Kotzur, 2017, paras. 5, 10.
[41] von Mangoldt, Klein, and Starck, 2010, Art. 2 paras. 205, 224, 229.

measures.[42] However—as in German constitutional law—there is no explicit decision on the direct question of the quality of armaments.

However, it should be noted that there is indeed a decision existing, namely by the UK Supreme Court dated 19 June 2013[43] on the direct legal question at issue, which was exactly along the lines advocated here. The British army had killed or injured soldiers through "friendly fire" during the Second Gulf War. Therefore, in view of the specific English legal situation, the responsibility had to be clarified in court. The court found that the UK should be obliged to pay, as these casualties would most likely have been prevented by an easily available technical means, namely an identification friend/foe system.

It is interesting to note that the so-called "doctrine of combat immunity," which has long been advocated in the UK, was rejected for this. This theory briefly states that military operations are not justiciable. The UK Supreme Court rejected this in the case of armament decisions: The reason was that armament decisions do not correspond to concrete military combat due to the possibly lengthy decision-making processes that take place outside of concrete military operations,[44] where far-reaching decisions often have to be made within seconds. Based on the author's experience in many tactical simulations, often tactical decisions must be made in minutes or shorter periods. Whole battalions (300–500 soldiers) or companies are doomed after a wrong decision of the military leader.

The decisive factor here is the following: The soldier has a duty to endure the threats of deployment "bravely" and, in the worst case, to accept the loss of his own life — that is, death. However, in contrast to this duty to bear the risk, the state as the employer has the duty to provide every possible protection, particularly against unlawful acts by third parties, such as the Taliban in Afghanistan or the Russian army in Ukraine.[45] Just as an aside, this duty to protect exists naturally if, for example, the action of the enemy in war were lawful under international law. In addition to and independently of the state's constitutional duty to protect under Article 2 para. 2, sentence 1 of the German Basic Law, there is a mutual relationship of loyalty that can also be described as follows: The soldier must accept the risks of deployment, while the state must protect him as well as possible by,

[42] Karpenstein and Mayer, 2015, p. 39.
[43] UK Supreme Court, 2013, Smith and others v. MOD (41/2013) p. 1.
[44] Ibid.
[45] Gimmler, 1998, pp. 76–87.

among other things, giving him the best possible opportunities during action. Considering the scientific findings described above, the state must increase the probability of success and thus survival during action. The state must therefore do everything in its power to minimise risks to the life and limb of soldiers. In other words, if this requires improved effective and protective equipment, training, or deployment logistics appropriate to the situation, insofar as this is possible through correct political decisions, then this is precisely what must be provided. The principle of the duty to protect applies here: Someone who deploys another person for a dangerous activity must do everything possible to protect him from avoidable threats in this respect.[46] These principles particularly apply where a state has compulsory military service, as is the case in Austria, and the state actually forces citizens as soldiers to face the threat of military deployment, even more so than in volunteer armies such as the German Bundeswehr.

Of course, this also includes the actual use of existing suitable weapon systems, if this arises as part of an ongoing assessment of the situation. There is also room for discretion and judgement here. However, mere "political wishful thinking" to the detriment of the soldiers is inadmissible. The fact that the boundaries here are fluid needs no further explanation. For example, the decision to not send heavy equipment to Afghanistan was certainly justifiable for a long time. Particularly regarding protection technology, it is unlikely to be justifiable in the future to deploy infantry soldiers without mine-resistant boots in areas at risk of mines or improvised explosive devices once their effectiveness has been proven. The rapidly developing range of military protective equipment should also be mentioned here.[47]

It can be argued that there is a greater or lesser degree of political or tactical/operational discretion and judgement in the assessment of complex military situations. In other words, for the question to be assessed here, this means that the decisions on armaments and weapons systems must be reviewed time and again and cannot be made within the framework of the free scope for assessment and discretion. This is because these decisions are bound by fundamental rights. Therefore, these require specific measures to be taken to fulfil the assumed protection obligations. This is because such decisions are open to falsification in the sense of scientific theory.[48] Of

[46] Edenfeld, 2009, p. 938.
[47] 'Infanterist der Zukunft', 2013.
[48] Gimmler, 2016, p. 137, 143, 145.

course, it can be argued that the planning and realisation horizon—as well as the possible negative consequences for the battlefield due to obsolescence caused by the necessity of long-term planning, with the resulting future uncertainty—do not lead to any relevant technical or legally significant errors in the necessary *ex-ante* consideration. However, this train of thought is misleading: For example, as the UK Supreme Court's 2013 decision[49] showed, it is possible to qualify the lack of retrofitting decisions as incorrect in the legal sense. The best example of this is the ongoing war in Ukraine, where new drone equipment is created and adapted almost monthly, including the related defence measures. There is precisely no decades-long planning here; action must—and will—be taken quickly in the legal sense.

5. Conventional and alternative procurement channels: New ways to glory

5.1 No dealing with public procurement law and the related primary and secondary EU law

The following *does not* examine European and national public procurement law such as Article 346 of the treaty of the functioning of the European Union (FTEU) or European Community Directive 81/2009 for the coordination of supply contracts in the areas of defence and security.

5.2 Universal state's armament interests and goals

In the past, states extensively relied on state-owned companies, known as arsenals, to supply armaments. As far as can be seen, this hardly exists in the western world today. Instead, armaments come almost exclusively from private arms companies. This means that the means of procurement is the contract. The purchase contract is the classic contract for procurement, but is it the ideal form of procurement? It is useful to understand the fundamental interests of the state in the procurement of military equipment and then assess the contractual procurement channels. Of course, a complex defence procurement contract is not a simple purchase contract; it also includes a long-term contract for the supply of spare parts, upgrades, and possibly maintenance services. The term "purchase contract" is only used here in simplified form, as it represents the basic procurement transaction: The weapons system is purchased.

[49] UK Supreme Court, 2013, Smith and others v. MOD (41/2013) p. 1.

5.2.1 Secure, robust availability of armament

First, the universal armament interests of each state must be established. The state wants to have large-scale military equipment available under all circumstances, without any possibility for a third party — who does not act based on orders and obedience but on a contractual level of equality — to withdraw or restrict its use or to influence the way in which it is used in any way. In short, the state must be able to dispose of its army's equipment in every respect. This applies to not only exercises, manoeuvres, and normal operations but also conceivable defence or external deployment (e.g. in Afghanistan). Here, further essential interests can arise from the fact that procurement decisions should also be implemented quickly once a decision has been made in favour of a specific procurement project as being necessary for defence purposes. This is why commercial or previously established criteria, used in logistics and all long-term supply and performance relationships, must be used to assess a specific usage or performance situation.[50]

Applied to armed forces, this means that armament must always be available. This is based on logistics, understood as a secure supply chain or secure logistics and supply chain. It must not be fragile, that is, easily interruptible.

5.2.2 Future proof, sustainable armament

The requirements of the future can also be reliably mapped; this means that changed, particularly updated, products can be requested and are reliably available. The armament item is subject to the "revolution in military affairs"[51] from the very first moment. Translated to military procurement, this means that the armament item must also be able to be "upgraded" and thus kept up to date in the future. A prime example is the retrofitting of Leopard 2A4 with anti-tank/guided missile protection, based on Turkey's experience against the so-called Islamic State, and especially mine protection, which is now available on the Leopard 2A8 (2024).

[50] Gimmler, 2022, p. 74.
[51] Anand, 1999; Müller and Schörnig, 2001, p. 8.

The two criteria of "safe delivery" and "future-proof" are also summarised under resilience. Resilience is the ability to withstand future developments of a negative nature. It requires, on the one hand, that the armed forces protect themselves against known or foreseeable risks and, on the other hand, that they be able to adapt to as yet unknown developments as far as conceivable and possible, that is, not in the case of disruptive, devaluing developments. These also require contractual provisions, such as a special right of termination with compensation for the disadvantages for the landlord in case of a rental contract about a tactical aircraft. Regarding the universal interests and goals so far, the optimisation of long-term service contracts, such as logistics contracts, has hundreds of different contract design points[52] to optimise resilience on a best-practice basis. It is the art of best practice contractual drafting to reach the goal of resilience.

5.2.3 Commercial efficiency

The criteria for the fulfilment of the above requirements — "Secure, robust availability of armament" and "Future proof, sustainable armament" — means that armament must be available at a reasonable price. In public procurement law, the point of commercial efficiency is often still assessed independently of the criteria of "secure, robust supply through delivery or performance" and "future proof, sustainable armament," which is already wrong from the outset. That is, an uncertain availability situation or an availability situation that is not sustainable cannot be commercial, as it is burdened with unforeseeable risks. Depending on the requirement and classification, the aspect of the quality requirement for the service must also be considered. This aspect is not discussed further here.

5.3 Conventional procurement: Purchase contract as a system contract where applicable

For purchasing armaments, the conventional solution is analysed for pros and cons. The property-oriented conventional view (where the army buys an armament item) is as follows: The usually extremely durable large-scale combat equipment (Leopard, Eurofighter, etc.) is purchased. However, the purchase method is de facto an obstacle to modern armour or equipment, such as the German BW fleet of non-fighting fleet of cars and trucks, since the necessary high amounts are often not available. That is, the necessary

[52] Gimmler, 2022, p. 169.

purchase price amount does not exist in the yearly budget, or it has not been included in the budget.

Due to the specific situation of the full transfer of all risks (apart from warranty), purchase-based solutions are, in principle, suitable for passing on the costs of later adaptations, renewals, etc., to the defence companies at a higher price. The decisive factor is that these are deliveries after the transfer of risk within the meaning of §§ 446 ff. of the German Civil Code. With the handover, the Federal Republic of Germany or another EU or NATO state is not only the owner but also has no claims to further services, unless these are contractually included in special regulations or correspond to legal regulations.

5.4 Alternative rental/leasing procurement model

In the following, only the alternative procurement model of "renting/leasing" as a time-bound, usage-based procurement model is discussed. Many other methods, such as pooling and sharing or privatisation of special services, are only referred to but are not dealt with here.[53] This is because while the advantages of renting/leasing solutions can be presented very well, there is not enough space for a full discussion.

5.4.1 Business assessment of the alternative "rental/leasing" procurement model

Rental or the closely related leasing is a strictly *time-based* transfer of use. Here, the transfer of use for a limited period is synallagmatically linked to the payment of the purely time-oriented rent as remuneration for the tenant. The reciprocal and linked main services are therefore the transfer of use for a limited period and the payment of rent for the actual period of use. Of course, these use-related contracts have their own special features. To eliminate the risk of finding no possible rental successor after the first rental period, which must be priced in by the armament manufacturer (and thus the lessor) after the return of the armaments, it is practically necessary to conclude the contract for the full conceivable period of use, possibly with options. A short-term lease, as with cars or trucks, is therefore practically impossible; the uncertainty of a secondary market requires a life-cycle rental period.

[53] Clement, 2012, p. 7; Kaldrack, 2013, p. 19, 21.

This is a real paradigm shift. Instead of infinite property, the use-oriented consideration applies. To present the advantages, an example with some realistic assumptions must be analysed: The military equipment is rented for 20 years (a "life-cycle contract" as a best practice long-duration contract). The amount of the rent is determined by the cost of depreciation, normally calculated using the same annual rates. In addition, the financing costs, especially the interest to be paid and the calculated profit, are part of the rental rate.

The term "rent" is used when referring to the classic rental model, that is without any kind of transfer of ownership or purchase provision. The term "lease" is used when referring to a long-term lease, usually with some kind of provision for a right of purchase or right to sell, possibly to be exercised under certain circumstances, combined with a normally very long contract term.

For Germany, the author is guided here by the leasing decrees of the Federal Ministry of Finance from 1971 onwards, particularly the leasing decree for the income tax treatment of movable property leasing of 19 April 1971[54] and the decree on the tax attribution for partial amortisation leasing of movable property of 22 December 1975.[55] The legal situation for Austria is practically identical to that in Germany, particularly regarding the VAT-relevant allocation to purchase on the one hand (full VAT is incurred at the beginning) and to rent on the other (VAT is incurred *pro rata temporis*).[56] In other EU countries, the legal situation is likely to be similar or identical.

5.4.2 Historical examples of arms procurement and current proliferation issues in the NATO area

The rental model was already common in ancient Rome for state events, especially when it came to combat equipment. For example, gladiators and their equipment were hired for gladiatorial games.[57]

The most important *historical example* is the so-called Lend-Lease Act of 1941 in the United States, dated 18 February 1941. This law allowed

[54] Bundessteuerblatt (1971) I. p. 264.
[55] Bundesministerium der Finanzen (1975) IV B2 161/75, p. 2170.
[56] For explanations on the leasing law situation in Austria's Administrative Court, see Einkommensteuer-Richtlinien (EStR), 2000, Rz. p. 135; Rechtsinformationssystem des Bundes (RIS) Bundeskanzleramt, 28 May 2002; von Rosen, 2009.
[57] Gedeon, 2019.

the US President to sell, donate, or lease any type of weapon to any nation whose 'defence he deemed vital to the United States' at his plain discretion. The option of loaning rather than renting/leasing was used in favour of Great Britain.[58] The commercial basis was that Great Britain had essentially exhausted its financial resources after losing the French campaign in 1940 and because of the further burden of war, including against Italy.

This procurement method is also currently being used, at least in part, in NATO. See the following examples:

- Hungary leased 14 modern Saab Gripen fighter aircraft from Sweden.
- The Czech Republic also leased Saab Gripen fighter aircraft for EUR 62 million per year for the Czech Air Force.
- Great Britain procured air refuelling aircraft on a leasing basis.
- Germany procured its non-combat vehicle fleet via the federally owned BwFuhrparkService GmbH and also rented Israeli Heron drones.
- Norway procured submarines on a leasing basis.

All of these transactions have the classic tenancy law basis of a synallagmatic exchange relationship involving "temporary transfer of use in return for *pro rata temporis* payment." As mentioned under section 5.4.1, all these rental solutions are long-term contracts as far as military equipment is rented. As a consequence, the producer does not want to bear the risk of a second-hand market. Therefore, the German White Fleet typically goes contrary to short-term rental contracts, as obviously there is a working second-hand market.

5.4.3 "Objection": Typical objections from conventional procurers to the rental/leasing model

A) Temporary use

Temporary use is terminable, and the landlord may terminate it at the worst moment for the army. Although this is true, this situation can be avoided by numerous permissible contractual means and clauses, such as by an extremely long basic lease term of 30 years in Germany.

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[58] Wikipedia (2025) Leih- und Pachtgesetz, [Online]. Available at: https://de.wikipedia.org/w/index.php?title=Leih-_und_Pachtgesetz&oldid=249515695 (Accessed: 16 January 2025).

Ordinary termination rights are excluded for this period by definition, and extraordinary termination rights can be excluded to the greatest possible extent. The landlord's residual existing or perceived possibility of termination can be countered by a call option to be exercised in this case. This also counters the argument that the lessor can terminate the armaments, especially tanks, in the event of a concrete threat of war due to the so-called force majeure situation of war or deny its obligation to perform. However, these arguments are absurd for experienced contract lawyers because the underlying provisions are fully dispositive. There is practically no mandatory law in this area — all such rights that may exist by law can be excluded. This applies, for example, to the provisions in Sections 543 BGB (Germany) and 1118 ABGB (Austria).

B) Risks from the person of the landlord

The area of risks that result from the person of the landlord is mentioned. Then, what about insolvency and similar risks? Here, too, special regulations in national law must be disregarded, although they would have to be examined. On the one hand, insolvency could be averted from the outset using the takeover rights (call option) of the tenant, that is the state, in the event of insolvency with full coverage of the debt. On the other hand, the same could be achieved by a state guarantee declaration or by measures in advance of conceivable insolvency, which could and would have to be agreed upon. Here, too, the purchase call option should be mentioned.

C) Hostile takeover

The sale of shares by way of share deals to other private companies or even "dangerous foreign countries" such as China is repeatedly mentioned as a spectre. This must also be countered by pre-emptive rights and, in the case of foreign sales, by measures under the Foreign Trade and Payments Act (Germany), such as prohibitions on sale.

D) Obsolescence and risk of loss

Finally, a key aspect is maintenance and loss in the event of deployment and for future proofing (which is the ability to retrofit; e.g. Leo 2A1 is now retrofitted to Leo 2A8 as the German Leopard main battle tank). This, too, presents an illusory problem: Maintenance/repair can be contractually regulated through system repairs by the manufacturers on the one hand and, on the other hand, through troop maintenance itself. The spectre of the loss

of this armament in the event of war is again a simple misconception and a pseudo-problem. The problem is the same as with the loss of one's own purchased combat vehicle: It simply has to be procured anew. The lessor must be obliged to provide a new vehicle/equipment and lease it. In the event of purchase, a new piece of equipment would have to be bought, so it is the same financial situation.

5.5 Holistic optimisation view of defence procurement, using the example of VAT optimisation[59]

We can state that the procurement of military equipment, which is expensive but at the same time relevant to fundamental rights, requires a legally multidimensional approach and encompasses numerous special aspects. Many aspects are suitable for optimisation.

Overall, the aspects of public procurement law, pricing law, civil law aspects of contract design, and the basic rights (under public law) of any soldiers who may fight must be considered.

Surprisingly, one special optimisation point is VAT law, as this area can be used for further optimisation in conjunction with rental and leasing procurement. In the following, some relevant aspects of the VAT legal situation are examined. These are the main VAT legal possibilities for procurement optimisation. In 2024, the defence expenditure of the EU member states amounted to around EUR 326 billion; thus, the use of VAT structuring options results in significant benefits.[60] In other words, the efforts of complex legal optimisation analysis are worthwhile.

5.5.1 VAT as a typical special agenda for optimising defence procurement

At first, it may seem surprising to look at VAT. However, the common German catchphrase of "*Linke Tasche, Rechte Tasche* = left pocket, right pocket"—meaning that it is not worthwhile for the state to save VAT, as it loses precisely this VAT as tax revenue—is patently false.

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[59] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax.

[60] Europäische Verteidigungsbereitschaft (2024) Europäische Verteidigungsausgaben erreichen 2024 neues Rekordhoch in europa.rlp.de, [Online]. Available at: http://europa.rlp.de/service/presse/detail/europaeische-verteidigungsausgaben-erreichen-2024-neues-rekordhoch (Accessed: 22 November 2024).

This is because VAT is by no means neutral from a commercial perspective; it would only be neutral if the Federal Republic of Germany paid VAT, as it would benefit from it correspondingly.

In accordance with Article 106 (3) of the German Basic Law, the German system of fiscal equalisation provides a split of the VAT revenue between the federal government, federal states, and municipalities. Accordingly, as per the figures for 2022,[61] only around 48% of the VAT is due to the federal government. In other words, only 48 cents of every euro paid in VAT flows back into the federal budget — a bad "deal" from a commercial perspective. However, this deal becomes catastrophic when you realise that of these 48 cents, only about 5 cents (about 10%) actually flow back into the defence budget. However, this has a much greater impact when you realise that a portion of the combat vehicles supplied must actually be financed by a loan with regard to the national debt, which burdens the investment part of the defence budget at the time they are used.

5.5.2 EU-Directive on the harmonisation of the VAT-System Directive: VAT assessment of the reference model "sales contract"

The following describes that the direct legal provisions are based on the German tax law situation. A very similar legal situation is likely to apply to Hungary, subject to a more detailed examination, as all European VAT laws are based on the VAT-System Directive and the follow-up directives.[62] The main provisions of the VAT-System Directive apply directly if states do not transpose the provisions of the directive or do not transpose them correctly and the provisions are sufficiently clear. In this case, the provisions take precedence over national VAT law.[63]

Regardless of whether the procurement is "stretched" within the framework of a long-term purchase contract for newly manufactured products or is also carried out *uno actu* for existing systems, the full purchase price (if applicable, less certain retained security amounts for

[61] Wikipedia (2025) Gemeinschaftssteuer (Deutschland), [Online]. Available at: https://de.wikipedia.org/w/index.php?title=Gemeinschaftsteuer_(Deutschland)&oldid=251576795 (Accessed: 16 January 2025).

[62] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax; Lohse and Peltner, 2007, p. 1.

[63] C-651/11, *Staatssecretaris van Financiën v X BV,* 30 May 2013. See the established case law of the ECJ: Bunjes, 2018, p. 1, para. 9.

service disruptions due to material defects) must be paid in each case, including VAT.

In this respect, the state acts as a non-entrepreneur and is therefore not entitled to deduct VAT input tax with regard to VAT in accordance with Sections 2 and 15 of the German VAT Act. In other words, both the net purchase price and VAT must be financed in full and are therefore charged to the investment part of the defence budget, which in Germany is given in Section 14. This means that the purchase price of EUR 15 million for a "Puma" infantry fighting vehicle system to be financed includes EUR 2.4 million in VAT.

5.5.3 Advantages of the rental model from a VAT perspective: Military procurement as an object of typical commercial optimisation, in this case through contracts for VAT-favourable structuring

The structure of the rental agreement allows only a fraction of the initial VAT to be financed *pro rata temporis*—up to 30 years in extreme cases—and this alone has a considerable interest-saving effect.

The focus here is also on the VAT aspect. As long as the current European VAT law situation exists, according to which investments in the defence sector are also subject to VAT and the defence budget is thus burdened, it should be recognised that the defence ministries must also include VAT-favourable structures in their considerations.

For that, the following short sample calculation should be made. The roughly simplified alternative calculation for the amount with a purchase price of EUR 10 million and VAT of 20% is as follows:

- Purchase consideration: EUR 10 million purchase price for an armament item + 20% = EUR 12 million, as a burden on the Ministry of Defence budget in the year of purchase.
- Consideration of rental procurement: Assumed annual rental amount of EUR 550,000 + VAT (calculation assumptions: EUR 500,000 depreciation with a normal useful life of 20 years, 5% interest, and 5% profit) + 20% VAT = EUR 660,000 as an annual burden on the budget.
- Regarding the first year: Instead of EUR 12 million for one tank, we can get more than 18 tanks for the same amount (EUR 12 million/660,000 = ~18).

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